

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: July 25, 2005, 07:36:04 ; Search time 112.991 Seconds  
(without alignments)  
521.183 Million cell updates/sec

Title: us-10-058-069-7\_COPY\_20\_134

Perfect score: 605

Sequence: 1 QVQLVQSGAEVKKPGASVKI.....CTRSLNMAVWGQGLTVTVSS 115

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database : UNIPROT\_03\*

1: uniprot\_sprot.\*

2: uniprot\_trembl.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	459.5	76.0	487	2 Q65ZL2	Q65ZL2 mus sp. fv/
2	453.5	75.0	465	2 Q6PJB2	Q6PJB2 mus musculus
3	443	73.2	473	2 Q9D8L4	Q9D8L4 mus musculus
4	434	71.7	481	2 Q91WT1	Q91WT1 mus musculus
5	420	69.4	489	2 Q8VCX4	Q8VCX4 mus musculus
6	417	68.9	120	1 HV03_MOUSE	P01746 mus musculus
7	417	68.9	480	2 Q8K0Z4	Q8K0Z4 mus musculus
8	415	68.6	614	2 Q7TWT6	Q7TWT6 mus musculus
9	414.5	68.5	109	2 Q9JL75	Q9JL75 mus musculus
10	414.5	68.5	145	2 Q924Q9	Q924Q9 mus musculus
11	414	68.4	140	1 HV02_MOUSE	P01746 mus musculus
12	414	68.4	146	2 Q924Q3	Q924Q3 mus musculus
13	412	68.1	244	2 Q65ZC8	Q65ZC8 mus musculus
14	411.5	68.0	482	2 Q8K172	Q8K172 mus musculus
15	410	67.8	140	2 Q924P8	Q924P8 mus musculus
16	410	67.8	142	2 Q924Q1	Q924Q1 mus musculus
17	410	67.8	464	2 Q6PF95	Q6PF95 mus musculus
18	409.5	67.7	145	2 Q924Q6	Q924Q6 mus musculus
19	409.5	67.7	145	2 Q924R4	Q924R4 mus musculus
20	408	67.4	140	2 Q924R2	Q924R2 mus musculus
21	406.5	67.2	143	2 Q924R0	Q924R0 mus musculus
22	405.5	67.0	124	2 Q9UL92	Q9UL92 homo sapien
23	405.5	67.0	613	2 Q8VCX7	Q8VCX7 mus musculus
24	405	66.9	134	2 Q65ZR6	Q65ZR6 mus musculus
25	404.5	66.9	139	2 Q924R5	Q924R5 mus musculus
26	403.5	66.7	145	2 Q924R1	Q924R1 mus musculus
27	403.5	66.7	463	2 Q91LC4	Q91LC4 mus musculus
28	402.5	66.5	518	2 Q6N030	Q6N030 homo sapien
29	402	66.4	146	2 Q924R8	Q924R8 mus musculus
30	401.5	66.4	137	2 Q924R6	Q924R6 mus musculus
31	401.5	66.4	139	1 HV07_MOUSE	P01751 mus musculus

ALIGNMENTS

32	401.5	66.4	145	2 Q924Q7	Q924Q7 mus musculus
33	399.5	66.0	141	2 Q924Q4	Q924Q4 mus musculus
34	399.5	66.0	145	2 Q924P7	Q924P7 mus musculus
35	399.5	66.0	498	2 Q6N041	Q6N041 homo sapien
36	399	66.0	117	2 Q9QXE9	Q9QXE9 mus musculus
37	398.5	65.9	136	2 Q7TPE3	Q7TPE3 mus musculus
38	397.5	65.7	143	2 Q91V67	Q91V67 mus musculus
39	397.5	65.7	143	2 Q924P9	Q924P9 mus musculus
40	397.5	65.7	143	2 Q924Q5	Q924Q5 mus musculus
41	395	65.3	470	2 Q7TMK1	Q7TMK1 mus musculus
42	394.5	65.2	143	2 Q924Q0	Q924Q0 mus musculus
43	394.5	65.2	488	2 Q8K0F2	Q8K0F2 mus musculus
44	394	65.1	117	2 Q9QXF0	Q9QXF0 mus musculus
45	394	65.1	119	2 Q9UL94	Q9UL94 homo sapien
46	394	65.1	142	2 Q924Q2	Q924Q2 mus musculus
47	393.5	65.0	145	2 Q924R3	Q924R3 mus musculus
48	393	65.0	472	2 Q6PJA7	Q6PJA7 mus musculus
49	392.5	64.9	143	2 Q924R7	Q924R7 mus musculus
50	392	64.8	146	2 Q924Q8	Q924Q8 mus musculus
51	391.5	64.7	143	2 Q924P6	Q924P6 mus musculus
52	391	64.6	138	1 HV48_MOUSE	P03980 mus musculus
53	388	64.1	144	2 Q924P5	Q924P5 mus musculus
54	387.5	64.0	143	2 Q91VA2	Q91VA2 mus musculus
55	387.5	64.0	159	2 Q96Q80	Q96Q80 homo sapien
56	387	64.0	117	1 HV12_MOUSE	P01756 mus musculus
57	386	63.8	500	2 Q6N091	Q6N091 homo sapien
58	383	63.3	117	1 HV13_MOUSE	P01757 mus musculus
59	383	63.3	125	2 Q9UL95	Q9UL95 homo sapien
60	382.5	63.2	110	2 Q9JL83	Q9JL83 mus musculus
61	381.5	63.1	137	1 HV11_MOUSE	P01755 mus musculus
62	380.5	62.9	110	2 Q9JL77	Q9JL77 mus musculus
63	380.5	62.9	118	2 Q921C4	Q921C4 mus musculus
64	380	62.8	119	2 Q9GYZ2	Q9GYZ2 schistosoma
65	380	62.8	168	2 Q8VDC9	Q8VDC9 mus musculus
66	379.5	62.7	118	1 HV51_MOUSE	P06330 mus musculus
67	379	62.6	147	2 Q925S3	Q925S3 mus musculus
68	378	62.5	117	1 HV52_MOUSE	P06327 mus musculus
69	377	62.3	117	2 Q921C6	Q921C6 mus musculus
70	377	62.3	480	2 Q6P089	Q6P089 homo sapien
71	377	62.3	481	2 Q91WT3	Q91WT3 mus musculus
72	376	62.1	121	1 HV01_MOUSE	P01745 mus musculus
73	375.5	62.1	488	2 Q91WR1	Q91WR1 mus musculus
74	374.5	61.9	481	2 Q8VCV5	Q8VCV5 mus musculus
75	373.5	61.7	243	2 Q7TQM2	Q7TQM2 mus musculus
76	372	61.5	150	2 Q9Y298	Q9Y298 homo sapien
77	372	61.5	170	2 Q925S2	Q925S2 mus musculus
78	369.5	61.1	475	2 Q6N095	Q6N095 homo sapien
79	369	61.0	121	2 Q8CGS2	Q8CGS2 mus musculus
80	369	61.0	123	2 Q8V1J1	Q8V1J1 mus musculus
81	368.5	60.9	147	1 HV1C_HUMAN	P01744 homo sapien
82	367.5	60.7	500	2 Q9BRV0	Q9BRV0 homo sapien
83	367	60.7	120	2 Q920E8	Q920E8 mus musculus
84	367	60.7	136	1 HV15_MOUSE	P01759 mus musculus
85	366.5	60.6	120	1 HV50_MOUSE	P06329 mus musculus
86	366	60.5	117	1 HV04_MOUSE	P01748 mus musculus
87	366	60.5	117	1 HV14_MOUSE	P01758 mus musculus
88	365.5	60.4	469	2 Q7Z7P5	Q7Z7P5 homo sapien
89	365	60.3	117	1 HV09_MOUSE	P01753 mus musculus
90	364	60.2	117	1 HV06_MOUSE	P01750 mus musculus
91	359	59.3	111	2 Q9D9B8	Q9D9B8 mus musculus
92	359	59.3	117	1 HV49_MOUSE	P06328 mus musculus
93	357	59.0	117	1 HV1B_HUMAN	P01743 homo sapien
94	356	58.8	474	2 Q8R3H6	Q8R3H6 mus musculus
95	355.5	58.8	114	2 Q9JL81	Q9JL81 mus musculus
96	353	58.3	484	2 Q9JLA6	Q9JLA6 mus musculus
97	351.5	58.1	116	2 Q9UL89	Q9UL89 homo sapien
98	349	57.7	109	1 HV10_MOUSE	P01754 mus musculus
99	349	57.7	117	1 HV10_MOUSE	P01754 mus musculus
100	347	57.4	117	1 HV1G_HUMAN	P23083 homo sapien

```
RESULT 1
Q55ZL2 PRELIMINARY; PRT; 487 AA.
AC Q65ZL2;
DT 25-OCT-2004 (TrEMBLrel. 28, Created)
DT 25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
DT 25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE FV/M4.
GN Name=M4-IFN-<tau>;
OS Mus sp.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10095;
RN [1]
RP SEQUENCE FROM N.A.
RC MEDLINE=96272580; PubMed=8688499;
RA Qi Y., Xiang J.;
RT "A genetically engineered single-gene-encoded anti-TAG72 chimeric
RL antibody secreted from myeloma cells.";
RL Hum. Antibodies Hybridomas 6:161-166(1995).
DR EMBL; S82493; AAB37424.2; -.
DR InterPro; IPR003599; IG.
DR InterPro; IPR007110; IG-like.
DR InterPro; IPR003597; IG_c1.
DR InterPro; IPR003598; IG_c2.
DR InterPro; IPR003596; IG_MHC.
DR InterPro; IPR003596; IG_V.
DR Pfam; PF07654; CI-set; 2.
DR SMART; SM00407; IGc1; 3.
DR SMART; SM00409; IG; 4.
DR SMART; SM00408; IGc2; 2.
DR SMART; SM00406; IGV; 2.
DR PROSITE; PS00290; IG_MHC; UNKNOWN 1.
DR PROSITE; PS00290; IG_MHC; UNKNOWN 1.
SQ SEQUENCE 487 AA; 53578 MW; C7B69F30555504 CRC64;

Query Match 76.0%; Score 459.5; DB 2; Length 487;
Best Local Similarity 77.2%; Pred. No. 1.4e-38;
Matches 88; Conservative 9; Mismatches 16; Indels 1; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60
DB 20 QVQLQSDAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQORLEWIGYFSPGNDIKY 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRLNMYWGQGLTVTS 114
DB 80 NEKFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRLNMYWGQGLTVTS 132

RESULT 2
Q6PJB2 PRELIMINARY; PRT; 465 AA.
AC Q6PJB2;
DT 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE Hypothetical protein.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Czech II; TISSUE=Mammary tumor;
RX MEDLINE=12477332; PubMed=12477332; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Colling F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Ziesberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
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RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywicki M.I., Skalska U., Smallus D.E., Schmerch A., Schein J.E.,
RA Jones S.J., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=Czech II; TISSUE=Mammary tumor;
RA Strausberg R.;
RL Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; BC018280; AAH18280.1; -.
DR HSSP; P01865; 1KBS.
DR InterPro; IPR003599; IG.
DR InterPro; IPR007110; IG-like.
DR InterPro; IPR003597; IG_c1.
DR InterPro; IPR003006; IG_MHC.
DR InterPro; IPR003596; IG_V.
DR Pfam; PF07654; CI-set; 3.
DR SMART; SM00409; IG; 2.
DR SMART; SM00407; IGc1; 3.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS00835; IG LIKE; 4.
DR PROSITE; PS00290; IG_MHC; UNKNOWN 1.
KW Hypothetical protein.
SQ SEQUENCE 465 AA; 51329 MW; 394F43C48DB3E21 CRC64;

Query Match 75.0%; Score 453.5; DB 2; Length 465;
Best Local Similarity 75.0%; Pred. No. 5.4e-38;
Matches 87; Conservative 11; Mismatches 17; Indels 1; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60
DB 20 QVQLQSDAEVVKPGASVKISCKASGYTFNSYIMHWKQNPQORLEWIGYFSPYNDTRK 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRLNMYWGQGLTVTS 115
DB 80 NEKFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRLNMYWGQGLTVTS 135

RESULT 3
Q9D8L4 PRELIMINARY; PRT; 473 AA.
AC Q9D8L4;
DT 01-JUN-2001 (TrEMBLrel. 17, Created)
DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Mus musculus 10 day old male pancreas cDNA, RIKEN full-length enriched
DE library, clone:181060009 product:immunoglobulin heavy chain 6 (heavy
DE chain of IgM), full insert sequence.
GN Name=Igh-1a;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Pancreas;
RX MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
RA Carninci P., Hayashizaki Y.;
RT "High-efficiency full-length cDNA cloning.";
RL Meth. Enzymol. 303:19-44(1999).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Pancreas;
```



Matches	85;	Conservative	11;	Mismatches	19;	Indels	2;	Gaps	1;
Qy	1	QVQLVQSGAEVYKPGASVKISKASGYTFTDTHAIHWKQNPQGRLEWIGYFSPGNDDPKY	60						
Db	20	QVQLLQSGPELVKPGASVKISKASGYTFTSYIHWKQRPQGLWIGWIPGSGNTKY	79						
Qy	61	NERFKGKATLTADTSASTAYVELSSLRSEDYAVYFCTRSNLMA--YNGQGTLVTVSS	115						
Db	80	NEKFKGKATLTADTKSSSTAYMFLSSLTSEDSAVYFCTRGCGWAFDYNGQGTTLTVSS	136						
RESULT 5									
Q8VCX4		PRELIMINARY;	PRT;	489	AA.				
ID	Q8VCX4								
AC	Q8VCX4								
DT	01-MAR-2002	(TrEMBLrel. 20, Created)							
DT	01-MAR-2002	(TrEMBLrel. 20, Last sequence update)							
DT	01-MAR-2004	(TrEMBLrel. 26, Last annotation update)							
DE	Igh-VJ558 protein.								
GN	Name=Igh-VJ558;								
OS	Mus musculus (Mouse).								
OC	Eukaryota; Metazoa;								
OC	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.								
OX	NCBI_TaxID=10090;								
FN	(1)								
SEQUENCE FROM N.A.									
RP	STRAIN=FVB/N; TISSUE=Colon;								
RC	MEDLINE=2238257; PubMed=12477932; DOI=10.1073/pnas.242603899;								
RX	Strauberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,								
RA	Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,								
RA	Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,								
RA	Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,								
RA	Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,								
RA	Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,								
RA	Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,								
RA	Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,								
RA	Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,								
RA	Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,								
RA	Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,								
RA	Fahey J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,								
RA	Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,								
RA	Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,								
RA	Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,								
RA	Krzywinski M.I., Skalska U., Smalls D.E., Schnerch A., Schein J.E.,								
RA	Jones S.J., Marra M.A.;								
RT	"Generation and initial analysis of more than 15,000 full-length human								
RT	and mouse cDNA sequences."								
RL	Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).								
RN	[2]								
RP	SEQUENCE FROM N.A.								
RC	STRAIN=FVB/N; TISSUE=Colon;								
RA	Strauberg R.,								
RL	Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.								
DR	EMBL; BC018322; AAH18322.1; -								
DR	HGSP; P01751; IAGW.								
DR	MGD; MGI:96486; Igh-VJ558.								
DR	Pfam; PF07654; C1-set; 2.								
DR	SMART; SM00406; IGV; 1.								
DR	PROSITE; PS00835; IG LIKE; 4.								
DR	PROSITE; PS00290; IG MHC; UNKNOWN 2.								
SQ	SEQUENCE 489 AA; 53208 MW; CC85B1194DAFEF2C CRC64;								
Query Match	69.4%;	Score 420;	DB 2;	Length 489;					
Best Local Similarity	63.2%;	Pred. No. 1.6e-34;							
Matches	79;	Conservative	18;	Mismatches	18;	Indels	10;	Gaps	1;
Qy	1	QVQLVQSGAEVYKPGASVKISKASGYTFTDTHAIHWKQNPQGRLEWIGYFSPGNDDPKY	60						
Db	20	KVQLQSGAEVYKPGASVKISKASGYTFTSYIHWKQRPQGLWIGWIP							



Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F.,  
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
RA Stapleton M., Soares M.B., Bernaldo M.F., Casavant T.L., Scheetz T.E.,  
RA Brownstein M.J., Udén T.B., Toshiyuki S., Carninci P., Prange C.,  
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,  
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
RA Fahey J., Helton E., Kettaman M., Madan A.C., Rodrigues S., Sanchez A.,  
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
RA Jones S.J., Marra M.A.;  
RA "Generation and initial analysis of more than 15,000 full-length human  
RT and mouse cDNA sequences";  
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
RN  
RP SEQUENCE FROM N.A.  
RC STRAIN=C57BL/6Ncr; TISSUE=Mammary tumor;  
RA Strausberg R.;  
RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.  
DR EMBL; BC029188; AAH29188.1; -  
DR HSSP; P01820; IG7J.  
DR InterPro; IPR007110; Ig-like.  
DR InterPro; IPR003597; Ig cl.  
DR InterPro; IPR003006; Ig MHC.  
DR InterPro; IPR003596; Ig v.  
DR Pfam; PF07654; Cl-set; 2.  
DR SMART; SM00406; IGV; 1.  
DR PROSITE; PS00835; IG LIKE; 4.  
DR PROSITE; PS00290; IG MHC; UNKNOWN\_2.  
KW Hypothetical protein.  
SQ SEQUENCE 480 AA; 51645 MW; 8690A63C69CDBED CRC64;  
  
Query Match 68.9%; Score 417; DB 2; Length 480;  
Best Local Similarity 70.1%; Pred. No. 3.1e-34;  
Matches 82; Conservative 12; Mismatches 21; Indels 2; Gaps 1;  
  
QY 1 QVOLVSGAEVVKPGASVKISCKASYFTFDHAIHWKQNPQORLEWIGYFSPGNDPFKY 60  
DB 20 QVOLVSGPELVKPGALVKISCKASYFTFDLSMKNKQPGQGPWIGWISFGDSSEY 79  
61 NERFKGKATLTADTSASTAYVELSSLSRSEDYVYFCTRL--NNAYWGQGLTVTVSS 115  
DB 80 NERFKGKATLTADKSSNTAYMHLSSLTSENSAVYFCARSKLGGFAYWGQGLTVTVSA 136  
  
RESULT 8  
Q7TWT6 PRELIMINARY; PRT; 614 AA.  
AC Q7TWT6  
DT 01-OCT-2003 (TrEMBLrel. 25, Created)  
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)  
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)  
DE MGC60843 protein.  
OS Mus musculus (Mouse).  
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
OX NCBI\_TaxID=10090;  
RN [1]  
RP SEQUENCE FROM N.A.  
RC STRAIN=C57BL/6Ncr; TISSUE=Hematopoietic Stem Cell;  
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F.,  
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
RA Stapleton M., Soares M.B., Bernaldo M.F., Casavant T.L., Scheetz T.E.,  
RA Brownstein M.J., Udén T.B., Toshiyuki S., Carninci P., Prange C.,  
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
RA Fahey J., Helton E., Kettaman M., Madan A.C., Rodrigues S., Sanchez A.,  
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
RA Jones S.J., Marra M.A.;  
RA "Generation and initial analysis of more than 15,000 full-length human  
RT and mouse cDNA sequences";  
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
RN  
RP SEQUENCE FROM N.A.  
RC STRAIN=C57BL/6Ncr; TISSUE=Hematopoietic Stem Cell;  
RA Strausberg R.;  
RL Submitted (JUN-2003) to the EMBL/GenBank/DBJ databases.  
DR EMBL; BC053409; AAH53409.1; -  
DR HSSP; P01820; IG7J.  
DR InterPro; IPR007110; Ig-like.  
DR InterPro; IPR003597; Ig cl.  
DR InterPro; IPR003006; Ig MHC.  
DR InterPro; IPR003596; Ig v.  
DR Pfam; PF07654; Cl-set; 4.  
DR SMART; SM00406; IGV; 1.  
DR PROSITE; PS00835; IG LIKE; 5.  
DR PROSITE; PS00290; IG MHC; UNKNOWN\_3.  
SQ SEQUENCE 614 AA; 67746 MW; 839BAF3B8D124F89 CRC64;  
  
Query Match 68.6%; Score 415; DB 2; Length 614;  
Best Local Similarity 68.9%; Pred. No. 6.5e-34;  
Matches 82; Conservative 12; Mismatches 21; Indels 4; Gaps 1;  
  
QY 1 QVOLVSGAEVVKPGASVKISCKASYFTFDHAIHWKQNPQORLEWIGYFSPGNDPFKY 60  
DB 20 QVOLVSGPELVKPGASVKISCKASYFTFSSSMNWNKQPGKLEWIGRYFGDGTNY 79  
61 NERFKGKATLTADTSASTAYVELSSLSRSEDYVYFCTR---SLNAYWGQGLTVTVSS 115  
DB 80 NGKFKGKATLTADKSSNTAYMQLSSLTSDSAVYFCARDYGSYFYFAYWGQGLTVTVSA 138  
  
RESULT 9  
Q9JL75 PRELIMINARY; PRT; 109 AA.  
AC Q9JL75  
DT 01-OCT-2000 (TrEMBLrel. 15, Created)  
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)  
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)  
DE Anti-myosin immunoglobulin heavy chain variable region  
DE (Fragment).  
OS Mus musculus (Mouse).  
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
OX NCBI\_TaxID=10090;  
RN [1]  
RP SEQUENCE FROM N.A.  
RC STRAIN=BALB/c;  
RX MEDLINE=20446842; PubMed=10992488;  
RX DOI=10.1128/IAI.68.10.5803-5808.2000;  
RA Malkiel S., Liao L., Cunningham M.W., Diamond B.;  
RT "T-Cell-dependent antibody response to the dominant epitope of  
RT streptococcal polysaccharide, N-acetyl-glucosamine, is cross-reactive  
RT with cardiac myosin";  
RL Infect. Immun. 68:5803-5808(2000).  
DR EMBL; AF206031; AAF69329.1; -  
DR PIR; A30502; A30502.  
DR PIR; PH0989; PH0989.  
DR PIR; PH0990; PH0990.  
DR PIR; PH0991; PH0991.  
DR PIR; PH0992; PH0992.  
DR PIR; PH0993; PH0993.  
DR PIR; PH0994; PH0994.

```
DR PIR; PH0995; PH0995.
DR PIR; PH1094; PH1094.
DR PIR; PH1096; PH1096.
DR PIR; S26312; S26312.
DR PIR; S26313; S26313.
DR HSSP; P01751; 1NQ8.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003596; Ig_v.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PSS0835; IG_LIKE; 1.
FT NON_TER 109 1
FT NON_TER 109 109
SQ SEQUENCE 109 AA; 12118 MW; FF65E441BBP936A6 CRC64;

Query Match
Best Local Similarity 68.5%; Score 414.5; DB 2; Length 109;
Matches 78; Conservative 12; Mismatches 16; Indels 3; Gaps 1;

QY 10 EVVKPGASVKISCKASGYTFTDTHAIHWVKONPGQRLIEWIGYFSPGNDDFKYGKAT 69
Db 1 ELVKPGASVKMSCKASGYTFTSYVMHWVKQKPGQGLEWIGYINPYNDGTYKNEKFKGKAT 60

QY 70 LTADTASATAYVELSLRSEDATVYFCTRLN---MAYWGQGLTVTVSS 115
Db 61 LTSDKSSATAYVELSLRSEDATVYFCTRLN---MAYWGQGLTVTVSS 109

RESULT 10
Q924Q9 PRELIMINARY; PRT; 145 AA.
ID Q924Q9
AC Q924Q9;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Vh186, 2-D-J-C mu protein (Fragment).
GN Names:Vh186.2-D-J-C mu;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6;
RA Kozono Y., Kozono H., Azuma T.;
RL Submitted (AUG-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB067791; BAB63276.1; -.
DR PIR; F28833; F28833.
DR PIR; F33932; F33932.
DR PIR; PH1105; PH1105.
DR PIR; PH1108; PH1108.
DR PIR; PH1114; PH1114.
DR PIR; PH1118; PH1118.
DR PIR; PH1119; PH1119.
DR PIR; PH1125; PH1125.
DR PIR; PH1126; PH1126.
DR PIR; PH1128; PH1128.
DR PIR; PH1129; PH1129.
DR PIR; PH1131; PH1131.
DR PIR; PH1134; PH1134.
DR PIR; PH1137; PH1137.
DR PIR; PH1139; PH1139.
DR PIR; PH1142; PH1142.
DR PIR; PH1144; PH1144.
DR PIR; PH1147; PH1147.
DR PIR; PH1149; PH1149.
DR PIR; PH1150; PH1150.
DR PIR; PH1151; PH1151.
DR PIR; PH1152; PH1152.
DR PIR; PH1153; PH1153.
DR HSSP; P01751; 1A6W.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PSS0835; IG_LIKE; 1.
FT NON_TER 1 1
```

```
FT NON_TER 145 145
SQ SEQUENCE 145 AA; 16001 MW; 0F409EB09FA333D2 CRC64;

Query Match
Best Local Similarity 68.5%; Score 414.5; DB 2; Length 145;
Matches 81; Conservative 12; Mismatches 22; Indels 5; Gaps 1;

QY 1 QVOLVQSGAEVVKPGASVKISCKASGYTFTDTHAIHWVKONPGQRLIEWIGYFSPGNDDFKY 60
Db 1 QVOLQOPGAELVKPGASVKISCKASGYTFTSYVMHWVKQKPGQGLEWIGRIDPNSGGTKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDATVYFCTRLS-----NMAYWGQGLTVTVSS 115
Db 61 NEKFKSKATLTVDKPSSTAYMQLSLTSDSAVYFCARSLITTYANDYWGQGSTVTVSS 120

RESULT 11
HV02 MOUSE STANDARD; PRT; 140 AA.
ID HV02 MOUSE
AC P01746;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Ig heavy chain V region 93G7 precursor.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=A/J;
RA Sime J., Rabbitts T.H., Estess P., Slaughter C., Tucker P.W.,
RA Capra J.D.;
RT "Somatic mutation in genes for the variable portion of the
RT immunoglobulin heavy chain.";
RL Science 216:309-311(1982).
CC 1- SIMILARITY: Contains 1 immunoglobulin-like domain.
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; J00493; AAA38128.1; -.
DR PIR; A94264; HVMSG7.
DR HSSP; P01747; 1JFQ.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; ig; 1.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PSS0835; IG_LIKE; 1.
KW Hybridoma; Immunoglobulin V region; Signal.
FT SIGNAL 1 19
FT CHAIN 20 140 Ig heavy chain V region 93G7.
FT DOMAIN 20 139 Ig-like.
FT NON_TER 140 140
SQ SEQUENCE 140 AA; 15514 MW; 25A4CBBE31DA5CE8 CRC64;

Query Match
Best Local Similarity 68.4%; Score 414; DB 1; Length 140;
Matches 79; Conservative 15; Mismatches 21; Indels 6; Gaps 1;

QY 1 QVOLVQSGAEVVKPGASVKISCKASGYTFTDTHAIHWVKONPGQRLIEWIGYFSPGNDDFKY 60
Db 20 EVOLQOQGAELVRAGSSVKMSCKASGYTFTSYGINWVKQKPGQGLEWIGYINPGYINY 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDATVYFCTR-----SLNMAYWGQGLTVTVSS 114
Db 80 NEKFKGKATLTVDKSSSTAYMQLSLTSDSAVYFCARSHYGGSYDFYWGQGSTPLTVS 139
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Qy 115 S 115
Db 140 S 140

RESULT 12
Q924Q3
ID Q924Q3 PRELIMINARY; PRT; 146 AA.
AC Q924Q3
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE VHI86.2-D-J-C mu protein (Fragment).
GN Name=VHI86.2-D-J-C mu;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=C57BL/6;
RA Kozono Y., Kozono H., Azuma T.;
RL Submitted (JUG-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB067797; BAB63282.1; -.
DR PIR; F28833; F28833.
DR PIR; F39332; F39332.
DR PIR; F11105; F11105.
DR PIR; F11108; F11108.
DR PIR; F11114; F11114.
DR PIR; F11118; F11118.
DR PIR; F11119; F11119.
DR PIR; F11125; F11125.
DR PIR; F11126; F11126.
DR PIR; F11128; F11128.
DR PIR; F11129; F11129.
DR PIR; F11131; F11131.
DR PIR; F11134; F11134.
DR PIR; F11137; F11137.
DR PIR; F11139; F11139.
DR PIR; F11142; F11142.
DR PIR; F11144; F11144.
DR PIR; F11147; F11147.
DR PIR; F11149; F11149.
DR PIR; F11150; F11150.
DR PIR; F11151; F11151.
DR PIR; F11152; F11152.
DR PIR; F11153; F11153.
DR HSP; P01751; IAEW.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS50835; IG_LIKE; 1.
FT NON_TER 146 146
FT NON_TER 146 146
SQ SEQUENCE 146 AA; 16136 MW; 16136 MW; CEA8DD6E1955807F CRC64;

Query Match 68.4%; Score 414; DB 2; Length 146;
Best Local Similarity 66.9%; Pred. No. 1.7e-34;
Matches 81; Conservative 12; Mismatches 22; Indels 6; Gaps 1;

Qy 1 QVOLVQSGAEVVKPGASVKISCKASGYTPTDTHAIHWKQNPGRLEWIGVFSQNDDFKY 60
Db 1 QVOLVQSGAEVVKPGASVKISCKASGYTPTDTHAIHWKQNPGRLEWIGVFSQNDDFKY 60

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDATVYFCTRSI-----NMAYWGQGLTVTS 114
Db 61 NERFKGKATLTADTSASTAYVELSLRSEDATVYFCTRSI-----NMAYWGQGLTVTS 114

Qy 115 S 115
Db 121 S 121

RESULT 13
Q8K172
ID Q8K172 PRELIMINARY; PRT; 482 AA.
AC Q8K172
DT 01-OCT-2002 (TrEMBLrel. 22, Created)
DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Igh-VJ558 protein.
GN Name=Igh-VJ558;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=mix FVB/N; TISSUE=Mammary tumor;
RC MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Srausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Uedlin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
```



[illegible]

**RESULT 18**

Q924Q6  
ID Q924Q6

PRELIMINARY; PRT; 145 AA.

NCBI\_LaXID=10030;  
RN [1]



RESULT	ID	Q8VCX7	PRELIMINARY;	PRT;	613 AA.
AC	01-MAR-2002	(T-EMBLrel. 20, Created)			
DT	01-MAR-2002	(T-EMBLrel. 20, Last sequence update)			
DT	01-MAR-2004	(T-EMBLrel. 26, Last annotation update)			
DE	Igh-6 protein.				
GN	Name=Igh-6;				
OS	Mus musculus (Mouse).				
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;				
OC	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.				
OX	NCBI_TaxID=10090;				
LN	[1]				
LN	SEQUENCE FROM N.A.				
RP	STRAIN=FVB/N; TISSUE=Salivary gland;				
RC	MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;				
RA	Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,				
RA	Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,				
RA	Altschul S.F., Zengberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,				
RA	Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh P.,				
RA	Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,				
RA	Scapleton M., Soares M.B., Bonaldo M.P., Casavant T.L., Scheetz T.E.,				
RA	Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,				
RA	Raha S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,				
RA	Bosak S.A., McSwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,				
RA	Richards S., Worley K.C., Hale S.C., Garcia A.M., Gay L.J., Hulyk S.W.,				
RA	Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,				
RA	Fahey J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,				
RA	Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,				
RA	Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,				
RA	Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,				
RA	Krzywinski M.I., Skalek U., Smailus D.E., Schnerch A., Schein J.E.,				
RA	Jones S.J., Marra M.A.;				
RT	"Generation and initial analysis of more than 15,000 full-length human				
RT	and mouse cDNA sequences.";				
RL	Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).				
LN	[2]				
RP	SEQUENCE FROM N.A.				
RC	STRAIN=FVB/N; TISSUE=Salivary gland;				
RA	Strausberg R.;				
RL	Submitted (DEC-2001) to the EMBL/GenBank/DBJ databases.				
DR	EMBL; BC018315; AAH18315.1; -.				
DR	PIR; C30562; C30562.				
DR	HSSP; P01751; 1A6W.				
DR	MGD; MGI:96448; Igh-6.				
DR	GO; GO:0019815; C:B-cell receptor complex; IDA.				
DR	GO; GO:0009897; C:external side of plasma membrane; IDA.				
DR	GO; GO:0042571; C:immunoglobulin complex, circulating; IDA.				
DR	GO; GO:0003823; P:antigen binding; IDA.				
DR	GO; GO:0030333; P:antigen processing; IDA.				
DR	GO; GO:0045022; P:early endosome to late endosome transport; IDA.				
DR	GO; GO:0016064; P:innate defense mechanism (sensu Vertebrata); IDA.				
DR	GO; GO:0050871; P:positive regulation of B-cell activation; IDA.				
DR	GO; GO:0030890; P:positive regulation of B-cell proliferation; IDA.				
DR	GO; GO:0045807; P:positive regulation of endocytosis; IDA.				
DR	Pfam; PF07654; C1-set; 4.				
DR	SMART; SM00406; IGV; 1.				
DR	PROSITE; PS00835; IG_LIKE; 5.				
DR	PROSITE; PS00290; IG_MHC; UNKNOWN 3.				
SQ	SEQUENCE 613 AA; 67855 MW; 41A9384DDA4C22862 CRC64;				
Query Match	67.0%; Score 405.5; DB 2; Length 613;				
Best Local Similarity	66.9%; Pred. No. 6.1e-33;				
Matches	79; Conservative 13; Mismatches 23; Indels 3; Gaps				
Qy	1 QVQLVQSGAEVVKPGASVKISCKASGYFTDTHAIHWKQNPQRLEWIGYFSPGNDDPKY 79				
Db	20 QVQLQSGAEIAKPKGASVKISCKATGYFTSSVWIEWVKQRGCHGLEWIGELPGSGSTNY 79				
Qy	61 NERFKGKATLTADTSASTAYVELSSLRSEDATVYFCTSLNNAY---WGQGLFTVTS 115				
Db	80 NEKFKGKATFTADTSNTAYMOLSLTSDSVAVYCARRLGWRVYDVGWAGTFTVTS 137				



```
RESULT 24
Q52R6
ID Q652R6 PRELIMINARY; PRT; 134 AA.
AC Q652R6;
DT 25-OCT-2004 (TrEMBLrel. 28, Created)
DT 25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
DT 25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE Ab 126.33 heavy chain variable and joining regions (Fragment).
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=91237115; PubMed=1709665;
RA Rueff-Juy D., Marche P.N., Drapier A.-M., Cazenave P.-A.;
RT "Junctional diversity of H and L chains allows the coexpression of two
RT mutually exclusive idiotopes (Idi104 and Idi558).";
RL J. Immunol. 146:4024-4030(1991).
DR EMBL; M74139; AAA37776.1; -.
DR InterPro; IPR003599; IG.
DR InterPro; IPR007110; IG-like.
DR InterPro; IPR003596; IG_v.
DR Pfam; PF00047; IG; 1.
DR SMART; SM00409; IG; 1.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS50835; IG LIKE; 1.
FT NON_TER 1
SQ SEQUENCE 134 AA; 14908 MW; 1852D86D26FC7567 CRC64;

Query Match 66.9%; Score 405; DB 2; Length 134;
Best Local Similarity 65.0%; Pred. No. 1.3e-33;
Matches 76; Conservative 18; Mismatches 21; Indels 2; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWVKONPGORLEWIGYFSPGNDDFKY 60
DB 18 EVQLQSGPELVKPGASVKMSCKASGYTFTDYMKVKQSPGKSLWIGDINPNNGTISY 77
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDATVYFCTRLNMA--YWGQGLTVTVSS 115
DB 78 NQKFKGKATLTVDKSSSTAYMQLSLTSDSAVYCARDYSYVFDYWGQGLTVTVSS 134

RESULT 25
Q24R5
ID Q924R5 PRELIMINARY; PRT; 139 AA.
AC Q924R5;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE VH186.2-D-J-C mu protein (Fragment).
GN Name=VH186.2-D-J-C mu;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=C57BL/6;
RA Kozono Y., Kozono H., Azuma T.;
RL Submitted (AUG-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB067784; BAB63269.1; -.
DR PIR; PH1137; PH1137.
DR HSSP; P01751; 1A6V.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS50835; IG LIKE; 1.
FT NON_TER 1
FT NON_TER 139
SQ SEQUENCE 139 AA; 15221 MW; 8491E2F85614736A CRC64;

Query Match 66.9%; Score 404.5; DB 2; Length 139;
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Best Local Similarity 67.8%; Pred. No. 1.5e-33;
Matches 78; Conservative 14; Mismatches 22; Indels 1; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWVKONPGORLEWIGYFSPGNDDFKY 60
DB 1 QVQLQQPGAEVLKPGASVKLSCKASGYTFTSYMMHWVKQRPGRGLEWIGRIDFNSGGTKY 60
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDATVYFCTRLNMA--YWGQGLTVTVSS 115
DB 61 NEKFKSRATLTVDKPSSTAYMQLSLTSDSAVYCA-LLAEAYWGQGLTVTVSA 114

Search completed: July 25, 2005, 08:00:06
Job time : 114.991 secs
```

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: July 25, 2005, 07:52:16 ; Search time 24.607 Seconds  
(without alignments)  
449.666 Million cell updates/sec

Title: US-10-058-069-7\_COPY\_20\_134  
Perfect score: 605  
Sequence: 1 QVLVQSGAEVVKPGASVKI.....CTRSILMAYWGQGLTVTVSS 115

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 100 summaries

Database: PIR\_29.\*

1: pir1.\*  
2: pir2.\*  
3: pir3.\*  
4: pir4.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	470.5	77.8	133	2 PC1155	Ig heavy chain pre
2	456	75.4	138	2 S21810	Ig heavy chain v r
3	447	73.9	246	2 S38950	Ig gamma chain - m
4	447	73.9	446	2 S40295	Ig gamma-2a chain
5	444	73.4	119	2 S20640	Ig heavy chain v r
6	436.5	72.1	469	2 S37483	Ig gamma-2a chain
7	435.5	72.0	131	2 S66537	Ig heavy chain v r
8	433.5	71.7	112	2 A30502	Ig heavy chain v r
9	432.5	71.5	115	2 A54378	Ig heavy chain v r
10	430.5	71.2	118	2 S38717	Ig heavy chain v r
11	428.5	70.8	474	1 G2MS11	Ig gamma-2b chain
12	426	70.4	119	2 E30562	Ig heavy chain v r
13	423.5	70.0	118	2 S36265	Ig heavy chain v r
14	422.5	69.8	135	2 A30577	Ig heavy chain pre
15	422.5	69.8	139	2 PS0024	Ig heavy chain pre
16	422	69.8	125	2 S20639	Ig heavy chain v r
17	422	69.8	140	2 PH1484	Ig heavy chain v r
18	421	69.6	119	2 C30562	Ig heavy chain v r
19	421	69.6	123	2 F48677	Ig heavy chain v-D
20	419	69.3	138	2 E32513	Ig heavy chain pre
21	419	69.3	140	2 PH1482	Ig heavy chain v r
22	419	69.3	140	2 S04575	Ig heavy chain pre
23	418.5	69.2	120	2 G28195	Ig heavy chain v r
24	418.5	69.2	122	2 S32185	Ig heavy chain v r
25	418.5	69.2	139	2 A27609	Ig heavy chain pre
26	417	68.9	119	2 S45714	Ig heavy chain v r
27	416	68.8	119	2 D30562	Ig heavy chain v r
28	416	68.8	121	2 A26405	Ig heavy chain v r
29	416	68.8	123	2 G48677	Ig heavy chain v-D

30	416	68.8	142	2 A32483	Ig heavy chain v r
31	415	68.6	117	2 S09960	Ig heavy chain v-D
32	414.5	68.5	144	2 B30502	Ig heavy chain v r
33	414	68.4	116	2 S55542	Ig heavy chain v r
34	414	68.4	140	1 HVMSG7	Ig heavy chain pre
35	413.5	68.3	117	2 S25176	Ig heavy chain v r
36	413	68.3	118	2 S38565	Ig heavy chain v r
37	413	68.3	123	2 E48677	Ig heavy chain v-D
38	411.5	68.0	112	2 PL0245	Ig heavy chain v r
39	411.5	68.0	120	2 S41394	Ig heavy chain v r
40	411.5	68.0	120	2 F28195	Ig heavy chain v r
41	411.5	68.0	120	2 B22769	Ig heavy chain v r
42	410.5	67.9	135	2 S49530	anti-Sm antibody V
43	410	67.8	121	2 J21854	Ig heavy chain v r
44	408	67.4	117	2 JC2269	PL7-6 antibody hea
45	408	67.4	123	2 D33548	Ig heavy chain v-1
46	408	67.4	136	2 PL0208	Ig heavy chain pre
47	407.5	67.4	118	2 S37201	Ig heavy chain v r
48	407	67.3	109	2 PH1001	Ig heavy chain v r
49	407	67.3	140	2 PH1488	Ig heavy chain v r
50	405.5	67.0	104	2 PH1665	Ig heavy chain v r
51	405	66.9	111	2 PH0992	Ig heavy chain v r
52	405	66.9	118	2 PL0231	Ig heavy chain v r
53	405	66.9	123	2 S20646	Ig heavy chain v r
54	404.5	66.9	141	2 A32276	Ig heavy chain pre
55	403.5	66.7	110	2 PL0244	Ig heavy chain v r
56	403.5	66.7	110	2 PH0995	Ig heavy chain v r
57	403.5	66.7	116	2 JS3751	antibody Fab Jel 1
58	403.5	66.7	136	2 JL0077	Ig heavy chain pre
59	403	66.6	109	2 PH0989	Ig heavy chain v r
60	403	66.6	121	2 A30551	Ig heavy chain v r
61	403	66.6	140	2 PH1489	Ig heavy chain v r
62	402	66.4	111	2 PH0994	Ig heavy chain v r
63	402	66.4	115	2 A56700	Ig heavy chain (an
64	402	66.4	117	2 S19966	Ig heavy chain v r
65	402	66.4	121	2 S19969	Ig heavy chain v r
66	402	66.4	140	2 PH1498	Ig heavy chain v r
67	401.5	66.4	112	2 S26473	Ig heavy chain v r
68	401.5	66.4	117	2 S55541	Ig heavy chain v r
69	401.5	66.4	119	2 A24672	Ig heavy chain pre
70	401.5	66.4	137	2 F29380	Ig heavy chain pre
71	401.5	66.4	139	1 MEMS18	Ig heavy chain pre
72	401.5	66.4	287	4 PC4402	pelB leader/Ig hea
73	401	66.3	111	2 PH0993	Ig heavy chain v r
74	400	66.1	123	2 B30560	Ig heavy chain v r
75	399.5	66.0	126	2 S31930	Ig gamma chain pre
76	399	66.0	109	2 PH1096	Ig heavy chain v r
77	399	66.0	111	2 PH0990	Ig heavy chain v r
78	399	66.0	117	2 S18553	Ig heavy chain v r
79	398.5	65.9	141	2 JL0076	Ig heavy chain pre
80	398	65.8	109	2 PH1094	Ig heavy chain v r
81	398	65.8	119	2 PL0089	Ig heavy chain v r
82	397.5	65.7	128	2 I37267	Ig heavy chain v r
83	397	65.6	109	2 PH0997	Ig heavy chain v r
84	397	65.6	119	2 S19964	Ig heavy chain v r
85	397	65.6	135	2 PH1493	Ig heavy chain v r
86	396.5	65.5	114	2 PH1667	Ig heavy chain v r
87	396.5	65.5	120	2 S31999	Ig heavy chain v r
88	396.5	65.5	123	2 S60067	Ig heavy chain pre
89	396.5	65.5	135	2 S00057	Ig heavy chain pre
90	396	65.5	119	2 PH1518	Ig heavy chain v r
91	395.5	65.4	118	2 PH1666	Ig heavy chain v r
92	395.5	65.4	118	2 C30560	Ig heavy chain v r
93	395.5	65.4	128	2 C37267	Ig heavy chain v r
94	395.5	65.4	137	2 E29380	Ig heavy chain pre
95	395	65.3	117	2 S03305	Ig heavy chain v r
96	395	65.3	127	2 S34014	Ig heavy chain v r
97	395	65.3	148	2 S29257	Ig heavy chain v r
98	395	65.3	151	2 PL0011	Ig heavy chain pre
99	394.5	65.2	124	2 S19665	Ig heavy chain v r
100	394.5	65.2	140	2 S09216	Ig heavy chain pre

## ALIGNMENTS

## RESULT 1

PC1155  
Ig heavy chain precursor V region (B72.3) - mouse (fragment)  
C:Species: Mus musculus (house mouse)  
C>Date: 30-Sep-1993 #sequence\_revision 30-Sep-1993 #text\_change 21-Jan-2000  
C:Accession: PC1155  
R:Whittle, N.; Adair, J.; Lloyd, C.; Jenkins, L.; Devine, J.; Schlom, J.; Raubitschek, A.  
Protein Eng. 1, 499-505, 1987  
A:Title: Expression in COS cells of a mouse-human chimaeric B72.3 antibody.  
A:Reference number: PC1155; MUID:89220990; PMID:3508296  
A:Accession: PC1155

A:Molecule type: mRNA  
A:Residues: 1-133 <WHI>  
C:Superfamily: immunoglobulin V region; immunoglobulin homology  
C:Keywords: heterotetramer; immunoglobulin  
F:1-19/Domain: signal sequence #status predicted <SIG>  
F:20-133/Product: Ig heavy chain V region (B72.3) #status predicted <MAT>  
F:34-117/Domain: immunoglobulin homology <IMM>

Query Match 77.8%; Score 470.5; DB 2; Length 133;  
Best Local Similarity 78.3%; Pred. No. 2.6e-36;  
Matches 90; Conservative 9; Mismatches 15; Indels 1; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDPKY 60  
DB 20 QVQLQSGDAELVKPGASVKISKASGYTFTDTHAIHWAKQKPGQGLEWIGYISPGNDDIKY 79  
QY 61 NERFKGKATLTADTSASTAYVELSLRSRSDTAVYFCTRSLNWAYWQGTTLTVSS 115  
DB 80 NEKFKGKATLTADKSSSTAYMQLSLTSDSAVYFCRKYSGYGHWQGTTLTVSS 133

## RESULT 2

S21810  
Ig heavy chain V region - mouse  
C:Species: Mus musculus (house mouse)  
C>Date: 20-Feb-1995 #sequence\_revision 20-Feb-1995 #text\_change 23-Jul-1999  
C:Accession: S21810  
R:Ostermeyer, M.; Brack, C.H.; Traunecker, A.; Koehler, G.  
submitted to the EMBL Data Library, January 1991  
A:Description: Nucleotide sequence of a rearranged VDJ-region of a mouse Ig mu heavy chain  
A:Reference number: S21810  
A:Accession: S21810  
A:Status: preliminary  
A:Molecule type: DNA  
A:Residues: 1-138 <OST>  
A:Cross-references: EMBL:X56936; NID:G54163; PIDN:CAA40257.1; PID:G54164  
C:Genetics:  
A:introns: 15/3

C:Superfamily: immunoglobulin V region; immunoglobulin homology  
C:Keywords: heterotetramer; immunoglobulin  
F:34-117/Domain: immunoglobulin homology <IMM>

Query Match 75.4%; Score 456; DB 2; Length 138;  
Best Local Similarity 73.9%; Pred. No. 5.7e-35;  
Matches 88; Conservative 12; Mismatches 15; Indels 4; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDPKY 60  
DB 20 QVQLQSGPELVKPGASVRIKASGYFTSYIHWKQRPQGLEWIGWIYPGNVNTKY 79  
QY 61 NERFKGKATLTADTSASTAYVELSLRSRSDTAVYFCTR-----SLNWAYWQGTTLTVSS 115  
DB 80 NEKFKGKATLTADKSSSTAYMQLSLTSDSAVYFCARNYGSYGLAYWQGTTLTVSA 138

## RESULT 3

S38950

Ig gamma chain - mouse  
C:Species: Mus musculus (house mouse)

C>Date: 19-May-1994 #sequence\_revision 10-Nov-1995 #text\_change 16-Jul-1999  
C:Accession: S38950  
R:Klebert, S.; Kratzin, H.D.; Zimmermann, B.; Vaesen, M.; Weisgerber, C.; Bit  
Biol. Chem. Hoppe-Seyler 374, 993-1000, 1993  
A:Title: Primary structure of the murine monoclonal IgG2a antibody mAb735 against alpha(C  
A:Reference number: S38950; MUID:94128242; PMID:8297501  
A:Accession: S38950  
A:Status: preliminary  
A:Molecule type: protein  
A:Residues: 1-246 <KLE>  
C:Superfamily: immunoglobulin C region; immunoglobulin homology  
C:Keywords: immunoglobulin  
F:137-201/Domain: immunoglobulin homology <IMM>

Query Match 73.9%; Score 447; DB 2; Length 246;  
Best Local Similarity 72.6%; Pred. No. 7e-34;  
Matches 85; Conservative 13; Mismatches 17; Indels 2; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDPKY 60  
DB 1 QIQLQSGPELVKPGASVKISKASGYTFTDYIHWKQRPQGLEWIGWIYPGSGNTKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSRSDTAVYFCTR--SLNWAYWQGTTLTVSS 115  
DB 61 NEKFKGKATLTVDTSSTAYMQLSLTSDSAVYFCARGGKFAVDYWGQGTSTVTSS 117

## RESULT 4

S40295  
Ig gamma-2a chain (mAb735) - mouse  
C:Species: Mus musculus (house mouse)  
C>Date: 07-Apr-1994 #sequence\_revision 07-Apr-1994 #text\_change 09-Jul-2004  
C:Accession: S40295  
R:Klebert, S.; Kratzin, H.D.; Zimmermann, B.; Vaesen, M.; Weisgerber, C.; Bit  
submitted to the EMBL Data Library, January 1993  
A:Description: Primary structure of the murine monoclonal IgG2a antibody mAb735 against  
A:Reference number: S40295  
A:Accession: S40295  
A:Molecule type: protein  
A:Residues: 1-446 <KLE>  
A:Cross-references: UNIPROT:Q99L25  
C:Genetics:

A:Map position: 12  
C:Superfamily: immunoglobulin C region; immunoglobulin homology  
C:Keywords: disulfide bond; glycoprotein; immunoglobulin; pyroglutamic acid  
F:1-446/Product: Ig gamma-2a chain #status experimental <MAT>  
F:1-117/Domain: V-D-J region <VDJ>  
F:118-446/Domain: C region <CHR>  
F:118-214/Domain: C1 region <CH1>  
F:215-230/Region: hinge  
F:231-340/Domain: C2 region <CH2>  
F:341-446/Domain: C3 region <CH3>

F:360-427/Domain: immunoglobulin homology <IMM>  
F:1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental  
F:22-96.144-199,261-321,367-425/Disulfide bonds: #status predicted  
F:132/Disulfide bonds: interchain (to light chain) #status predicted  
F:224,227,229/disulfide bonds: interchain #status predicted  
F:297/Binding site: carboxylate (Asn) (covalent) #status experimental

Query Match 73.9%; Score 447; DB 2; Length 446;  
Best Local Similarity 72.6%; Pred. No. 1.3e-33;  
Matches 85; Conservative 13; Mismatches 17; Indels 2; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDPKY 60  
DB 1 QIQLQSGPELVKPGASVKISKASGYTFTDYIHWKQRPQGLEWIGWIYPGSGNTKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSRSDTAVYFCTR--SLNWAYWQGTTLTVSS 115  
DB 61 NEKFKGKATLTVDTSSTAYMQLSLTSDSAVYFCARGGKFAVDYWGQGTSTVTSS 117

## RESULT 5

A;Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-131 <TSI>  
A:Cross-references: EMBL:X88902; NID:g895869; PIDN:CAA61364.1; PID:g1103701  
C:Superfamily: immunoglobulin v region; immunoglobulin homology  
F;15-98/Domain: immunoglobulin homology <IMM>

Query Match 72.0%; Score 435.5; DB 2; Length 131;  
Best Local Similarity 68.0%; Pred. No. 4.1e-33;  
Matches 83; Conservative 14; Mismatches 18; Indels 7; Gaps 1

QY 1 QVQLVSGAEVWPGASVKISCKASGYTFDTHAIHWKQNPGRLEWIGYSPGNDPFKY 60  
Db :|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||  
1 EVKLQESGAGLVKPGASVKMSCKASGYTFTSYVMHVKQPKQGGLWIGYNPYNDGTKY 60  
QY 61 NERFKGKATLTADTSASTAVVELSSLRSEDATVYCFTRSLN-----MAYWGQGTLLTV 113  
Db :|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||  
61 NERFKGKATLTDKSSSTAYMELSSLTSEDSAVYYCARDYRVVWYAMDYGQGTTLTV 120

QY 114 SS 115  
Db |||  
121 SS 122

RESULT 8  
A30502  
IG heavy chain V region (D44) - mouse  
C:Species: Mus musculus (house mouse)  
C>Date: 03-Nov-1988 #sequence\_revision 03-Nov-1988 #text\_change 09-Jul-2004  
C:Accession: A30502  
R;Ellat, D.; Webster, D.M.; Rees, A.R.  
J. Immunol. 141, 1745-1753, 1988  
A>Title: V region sequences of anti-DNA and anti-RNA autoantibodies from NZB/N/Strain J mice  
A:Reference number: A30502; MUID:88315787; PMID:2457627  
A:Accession: A30502  
A>Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-112 <EIL>  
A:Cross-references: UNIPROT:Q9JL75  
C:Superfamily: immunoglobulin v region; immunoglobulin homology  
C:Keywords: heterotetramer; immunoglobulin  
F;15-98/Domain: immunoglobulin homology <IMM>

Query Match 71.7%; Score 433.5; DB 2; Length 112;  
Best Local Similarity 73.5%; Pred. No. 5.4e-33;  
Matches 83; Conservative 11; Mismatches 18; Indels 1; Gaps 1

QY 1 QVQLVSGAEVWPGASVKISCKASGYTFDTHAIHWKQNPGRLEWIGYSPGNDPFKY 60  
Db :|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||  
1 EVQLQSGPELVKPGASVKMSCKASGDTFTSSVMHVWKQPKQGGLWIGYNPYNDGTKY 60  
QY 61 NERFKGKATLTADTSASTAVVELSSLRSEDATVYCFTRSLNMAYWGQGTLLTV 113  
Db :|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||  
61 NERFKGKATLTDKSSSTAYMELSSLTSEDSAVYYCARG-GFAYWGQGTLLTV 112

RESULT 9  
A54378  
IG heavy chain V region anti-triplex DNA - mouse (fragment)  
C:Species: Mus musculus (house mouse)  
C>Date: 06-Oct-1994 #sequence\_revision 18-Nov-1994 #text\_change 23-Jul-1999  
C:Accession: A54378  
R;Agazie, Y.M.; Lee, J.S.; Burkholder, G.D.  
J. Biol. Chem. 269, 7019-7023, 1994  
A>Title: Characterization of a new monoclonal antibody to triplex DNA and immunoglobulin heavy chain variable region  
A:Reference number: A54378; MUID:94165109; PMID:7509814  
A:Accession: A54378  
A>Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-115 <AGA>  
A:Cross-references: GB:S68981; NID:g545744; PIDN:AAB30095.1; PID:g545745  
A:Experimental source: spleen and myeloma cell line MOPC 315.43  
A>Note: sequence inconsistent with nucleotide translation

A;Note: sequence extracted from NCBI backbone (NCBIN:144172, NCBIPI:144173)  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotetramer; immunoglobulin  
F;15-98/Domain: immunoglobulin homology <IM>

Query Match 71.5%; Score 432.5; DB 2; Length 115;  
Best Local Similarity 71.3%; Pred. No. 6.8e-33;  
Matches 82; Conservative 13; Mismatches 17; Indels 3; Gaps 1;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQRLEWIGYFSPGNDPKY 60  
: ||| ||| : ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
DB 1 EVQLQSQGPDLVKPGASVKISCKASGYTFTHAIHWKQNPQRLEWIGYFSPGNDPKY 60  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
QY 61 NERFKGKATLTADTASATAYVELSLRSEDTSVAVFYCTSLN---MAYWGQGLT 112  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
DB 61 NEKFKGKATLTADKSSSTAYMQLSLTSEDSAVFYCARSSGGGYLYGWQGTTLT 115  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||

RESULT 10  
S38717  
Ig heavy chain V region - mouse  
C;Species: Mus musculus (house mouse)  
C;Date: 06-Jan-1995 #sequence\_revision 06-Jan-1995 #text\_change 20-Jun-2000  
C;Accession: S38717  
R;Cimanis, A.Y.  
submitted to the EMBL Data Library, November 1993  
A;Reference number: S38713  
A;Accession: S38717  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-118 <CIM>  
A;Cross-references: EMBL:X76020; NID:G416099; PIDN:CAA53607.1; PID:gl334262  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotetramer; immunoglobulin  
F;15-98/Domain: immunoglobulin homology <IM>

Query Match 71.2%; Score 430.5; DB 2; Length 118;  
Best Local Similarity 69.5%; Pred. No. 1.1e-32;  
Matches 82; Conservative 14; Mismatches 19; Indels 3; Gaps 1;  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQRLEWIGYFSPGNDPKY 60  
: ||| ||| : ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
DB 1 QDQLQSQPDLVKPGASVKMSCKASGYTFPTNVIHWKQNPQRQGLEWIGYIHPYNDGSKY 60  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
QY 61 NERFKGKATLTADTASATAYVELSLRSEDTSVAVFYCTR---SLNAYWGQGLT 115  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
DB 61 NDKFKGKATLTSDKSSSTAYMELSLTSEDSAVFYTCARENGNFYFDYWGQGTTLT 118  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||

RESULT 11  
G2MS11  
Ig gamma-2b chain - mouse  
C;Species: Mus musculus (house mouse)  
C;Date: 31-Mar-1980 #sequence\_revision 01-Dec-2000 #text change 09-Jul-2004  
C;Accession: S25057; A02157; A26235; A26233; A53598  
R;Fischer, R.; Voss, A.; Nierbach, M.; Munkizer, W.; Hirsch, H.J.; Kreuzaler, F.  
submitted to the EMBL Data Library, July 1992  
A;Description: Production of a Tobacco mosaic virus (TMV) inactivating neotop specific m  
A;Reference number: S25057  
A;Accession: S25057  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-474 <PIS>  
A;Cross-references: UNIPROT:P01866; EMBL:X67210; NID:G54826; PIDN:CAA47649.1; PID:g54827  
R;Yamawaki-Kataoka, Y.; Kataoka, T.; Takahashi, N.; Obata, M.; Honjo, T.  
Nature 283, 786-789, 1980  
A;Title: Complete nucleotide sequence of immunoglobulin gamma2b chain gene cloned from m  
A;Reference number: A02157; MUID:80120716; PID:6766534  
A;Contents: a allele  
A;Accession: A02157  
A;Molecule type: DNA  
A;Residues: 138-161, 'L', 163-189, 'FP', 193-474 <YAM>  
A;Cross-references: GB:J00461

A;Note: the sequence was determined from the germline gene  
R;Tucker, P.W.; Marcu, K.B.; Slichtom, J.L.; Blattner, F.R.  
Science 206, 1299-1303, 1979  
A;Title: Structure of the constant and 3' untranslated regions of the murine gamma2b heav  
A;Reference number: A26235; MUID:80081501; PMID:117548  
A;Contents: MPC 11  
A;Accession: A26235  
A;Molecule type: mRNA  
A;Residues: 138-172, 'P', 174-189, 'FP', 193-376, 'T', 378-474 <TU1>  
A;Note: Lys-474 is probably removed posttranslationally  
R;Tucker, P.W.; Marcu, K.B.; Newell, N.; Richards, J.; Blattner, F.R.  
Science 206, 1303-1306, 1979  
A;Title: Sequence of the cloned gene for the constant region of murine gamma2b immunoglob  
A;Reference number: A26232; MUID:80081502; PMID:117549  
A;Accession: A26232  
A;Molecule type: DNA  
A;Residues: 138-172, 'P', 174-189, 'FP', 193-376, 'T', 378-474 <TU2>  
R;Ollio, R.; Rougeon, F.  
Nature 296, 761-763, 1982  
A;Title: Mouse immunoglobulin allotypes: post-duplication divergence of gamma2a and gamma  
A;Reference number: A26233; MUID:82173203; PMID:6803173  
A;Contents: b allele  
A;Accession: A26233  
A;Molecule type: DNA  
A;Residues: 138-161, 'L', 163-189, 'FP', 193-300, 'R', 302-331, 'A', 333-437, 'DI', 440-474 <OLL>  
A;Cross-references: GB:J00461  
R;Kim, H.; Yamaguchi, Y.; Masuda, K.; Matsuura, C.; Yamamoto, K.; Irimura, T.; Takahashi  
J. Biol. Chem. 269, 12345-12350, 1994  
A;Title: O-glycosylation in hinge region of mouse immunoglobulin G2b.  
A;Reference number: A53598; MUID:94216359; PMID:7512967  
A;Accession: A53598  
A;Status: preliminary  
A;Molecule type: protein  
A;Residues: 234-251 <KIM>  
C;Comment: The a allele sequence is shown.  
C;Genetics:  
A;Introns: 138/1; 236/1; 258/1; 368/1  
A;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kap  
hain disulfide bonds. In some cases, such as IGA and IGM, the subunits associate into la  
C;Superfamily: immunoglobulin C region; immunoglobulin homology  
C;Keywords: alternative splicing; duplication; glycoprotein; heterotetramer; immunoglobul  
F;157-222/Domain: immunoglobulin homology <IM1>  
F;236-257/Region: hinge  
F;281-350/Domain: immunoglobulin homology <IM2>  
F;387-454/Domain: immunoglobulin homology <IM3>  
F;152/Disulfide bonds: interchain (to light chain) #status predicted  
F;164-220, 288-348, 394-452/Disulfide bonds: #status predicted  
F;247, 250, 253, 256/Disulfide bonds: interchain (to heavy chain) #status predicted  
F;324/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 70.8%; Score 428.5; DB 1; Length 474;  
Best Local Similarity 67.8%; Pred. No. 7e-32;  
Matches 80; Conservative 16; Mismatches 19; Indels 3; Gaps 1;  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQRLEWIGYFSPGNDPKY 60  
: ||| ||| : ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
DB 20 EVQLQSQGPDLVKPGASVKMSCKASGYTFITVYHWHVKQKPGQGLEWIGYINPNKDGTKF 79  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
QY 61 NERFKGKATLTADTASATAYVELSLRSEDTSVAVFYCTSLN---MAYWGQGLT 115  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
DB 80 NEKFKGKATLTSDKSSSTAYMELSLTSEDSAVFYCARDYDWDYFWAYWGQGLT 137  
: ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| : ||| : |||  
RESULT 12  
E30562  
Ig heavy chain V region (27.10.2) - mouse (fragment)  
C;Species: Mus musculus (house mouse)  
C;Date: 23-Mar-1989 #sequence\_revision 23-Mar-1989 #text\_change 16-Aug-1996  
C;Accession: E30562  
R;Sikder, S.K.; Borden, P.; Gruezo, F.; Akolkar, P.N.; Bhattacharya, S.B.; Morrison, S.L.  
J. Immunol. 142, 888-893, 1989  
A;Title: Amino acid substitutions in V-H CDR2 change the idiotype but not the antigen-bir  
A;Reference number: A30562; MUID:89110066; PMID:2464031

A;Accession: E30562  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-119 <SIK>  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotrimer; immunoglobulin  
F;15-98/Domain: immunoglobulin homology <IMM>

Query Match 70.4%; Score 426; DB 2; Length 119;  
Best Local Similarity 68.9%; Pred. No. 2.8e-32;  
Matches 82; Conservative 15; Mismatches 18; Indels 4; Gaps 1;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
Db 1 QVQLQSGAEVVKPGASVKISKATGYTFTSYWIEWKQRPFGHGLEWIGIFPGSGSTKY 60

Qy 61 NERFKGKATLTADTSASTAYVELSSLSRSEDYAVYFCTRL--SINMAYWGQGLTVTVSS 115  
Db 61 NERFKGKATLTADTSASTAYVELSSLSRSEDYAVYCARHYGSSSFAYWGQGLTVTVSA 119

RESULT 13  
S36265  
Ig heavy chain V region (clone alpha-MUC1-1) - human (fragment)  
C;Species: Homo sapiens (man)  
C;Date: 03-Feb-1994 #sequence\_revision 03-Feb-1994 #text\_change 23-Jul-1999  
C;Accession: S36265  
R;Giffiths, A.D.; Malmqvist, M.; Marks, J.D.; Bye, J.M.; Embleton, M.J.; McCafferty, J.  
EMBO J. 12, 725-734, 1993  
A;Title: Human anti-self antibodies with high specificity from phage display libraries.  
A;Reference number: S36256; MUID:93178448; PMID:7679990  
A;Accession: S36265  
A;Status: preliminary; nucleic acid sequence not shown  
A;Molecule type: mRNA  
A;Residues: 1-118 <GPI>  
A;Cross-references: EMBL:Z18846; NID:g33121; PIDN:CAA79298.1; PID:g939900  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotrimer; immunoglobulin  
F;15-98/Domain: immunoglobulin homology <IMM>

Query Match 70.0%; Score 423.5; DB 2; Length 118;  
Best Local Similarity 68.6%; Pred. No. 4.7e-32;  
Matches 81; Conservative 16; Mismatches 18; Indels 3; Gaps 1;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
Db 1 QVQLVQSGAEVVKPGASVKISKASGYTFTGYMHWVQAPGGQGLEWIMGNPSGNTY 60

Qy 61 NERFKGKATLTADTSASTAYVELSSLSRSEDYAVYFCTRL--SINMAYWGQGLTVTVSS 115  
Db 61 AOKFQGRVITTRDTSASTAYVELSSLSRSEDYAVYCARDFLSGYLDYWGQGLTVTVSS 118

RESULT 14  
A30577  
Ig heavy chain precursor V region (MRL10) - mouse (fragment)  
C;Species: Mus musculus (house mouse)  
C;Date: 04-May-1989 #sequence\_revision 04-May-1989 #text\_change 16-Aug-1996  
C;Accession: A30577  
R;Kofler, R.; Noonan, D.J.; Levy, D.E.; Wilson, M.C.; Moller, N.P.H.; Dixon, F.J.; Theof  
J. Exp. Med. 161, 805-815, 1985  
A;Title: Genetic elements used for a murine lupus anti-DNA autoantibody are closely rela  
A;Reference number: A30577; MUID:85159423; PMID:3920343  
A;Accession: A30577  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-135 <KOF>  
A;Cross-references: GB:M37621  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotrimer; immunoglobulin  
F;34-117/Domain: immunoglobulin homology <IMM>

Query Match 69.8%; Score 422.5; DB 2; Length 135;

Best Local Similarity 69.8%; Pred. No. 6.7e-32;  
Matches 81; Conservative 14; Mismatches 20; Indels 1; Gaps 1;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
Db 20 QVQLQSGAEVVKPGASVKISKASGYTFTSYWIEWKQRPFGQGLEWIGNIYFGSSSTNY 79

Qy 61 NERFKGKATLTADTSASTAYVELSSLSRSEDYAVYFCTRL--NMAYWGQGLTVTVSS 115  
Db 80 NERFKSKATLTVDTSSTAYMQLSSLTSDSAVYCARLVGGFAYWGQGLTVTVSA 135

RESULT 15  
PS0024  
Ig heavy chain precursor V region (6A4) - mouse  
C;Species: Mus musculus (house mouse)  
C;Date: 07-Jun-1990 #sequence\_revision 07-Jun-1990 #text\_change 22-Nov-1996  
C;Accession: PS0024  
R;Margat, M.; Eckhardt, A.; Ehret, W.; von Specht, B.U.; Duchene, M.; Domdey, H.  
Gene 74, 335-345, 1988  
A;Title: Cloning and characterization of cDNAs coding for the heavy and light chains of  
A;Reference number: PS0023; MUID:89232725; PMID:3149944  
A;Accession: PS0024  
A;Molecule type: mRNA  
A;Residues: 1-139 <MAR>  
A;Experimental source: strain BALB/c  
C;Comment: This chain is obtained from an IgG2a monoclonal antibody against Pseudomonas  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotrimer; immunoglobulin; pyroglytamic acid  
F;1-19/Domain: signal sequence #status predicted <SIG>  
F;20-139/Domain: Ig heavy chain V region #status predicted <IGV>  
F;34-117/Domain: immunoglobulin homology <IMM>  
F;20/Modified site: pyroglutamic acid (Gln) (in mature form) #status predicted

Query Match 69.8%; Score 422.5; DB 2; Length 139;  
Best Local Similarity 69.2%; Pred. No. 6.9e-32;  
Matches 83; Conservative 12; Mismatches 20; Indels 5; Gaps 1;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
Db 20 QVQLQSGAEVVKPGASVKISKASGYTFTAYMHWVQRPFGQGLEWIGNIYFNTGYTEY 79

Qy 61 NERFKGKATLTADTSASTAYVELSSLSRSEDYAVYFCTRL-----NMAYWGQGLTVTVSS 115  
Db 80 NQNFKDKATLTADKSSSTAYMQLSSLTSDSAVYCTRSYNYEGAMDYWGQGLTVTVSS 139

RESULT 16  
S20639  
Ig heavy chain V region - mouse  
C;Species: Mus musculus (house mouse)  
C;Date: 20-Feb-1995 #sequence\_revision 20-Feb-1995 #text\_change 23-Jul-1999  
C;Accession: S20639  
R;Losman, M.; Fasy, T.M.; Novick, K.E.; Monestier, M.  
submitted to the EMBL Data Library, February 1992  
A;Description: Relationships among antinuclear antibodies from autoimmune MRL mice react  
A;Reference number: S20639  
A;Accession: S20639  
A;Status: preliminary  
A;Molecule type: DNA  
A;Residues: 1-125 <LOS>  
A;Cross-references: EMBL:X65004; NID:g52598; PIDN:CAA46137.1; PID:g52599  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotrimer; immunoglobulin  
F;15-98/Domain: immunoglobulin homology <IMM>

Query Match 69.8%; Score 422; DB 2; Length 125;  
Best Local Similarity 65.6%; Pred. No. 6.9e-32;  
Matches 82; Conservative 12; Mismatches 19; Indels 12; Gaps 1;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
Db 1 EVQLQSGPELVKPGASVKRMKSKASGYTFTSYMHWVQKPGQGLEWIGNIHLNDGTYK 60





## RESULT 21

PH1482  
Ig heavy chain V region (clones 36-35[TG] and X7-TG) - mouse (fragment)  
C;Species: Mus musculus (house mouse)  
C;Date: 03-Feb-1994 #sequence\_revision 03-Feb-1994 #text\_change 07-May-1999  
C;Accession: PH1482; PH1495  
R;Giusti, A.M.; Manser, T.  
J. Exp. Med. 177, 797-809, 1993  
A;Title: Hypermutation is observed only in antibody H chain V region transgenes that have  
d for somatic mutation.  
A;Reference number: PH1482; MUID:93171820; PMID:8436910  
A;Accession: PH1482  
A;Status: translation not shown  
A;Molecule type: mRNA  
A;Residues: 1-140 <GU>  
A;Experimental source: hybridoma cell  
C;Genetics:  
A;Introns: 16/1  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotetramer; immunoglobulin  
F;34-117/Domain: immunoglobulin homology <IMM>

Query Match 69.3%; Score 419; DB 2; Length 140;  
Best Local Similarity 66.1%; Pred. No. 1.5e-31;  
Matches 80; Conservative 15; Mismatches 20; Indels 6; Gaps 1;

QY 1 QVQLVQSGAEVWPKGASVKISCKASGYTFTDTHAIHWKQNPQGORLEWIGYFSPGNDDFKY 60

DB 20 EVQLQSGAEVLRAGSVKISCKASGYTFTSYGINWVKQRPQGLEWIGYFSPGNDTKY 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSNLMA-----YWGQGLTVTVS 114

DB 80 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSNLMA-----YWGQGLTVTVS 139

QY 115 S 115

DB 140 S 140

## RESULT 22

S04575  
Ig heavy chain precursor V region (MRL-RF24) - mouse (fragment)  
C;Species: Mus musculus (house mouse)  
C;Date: 04-Dec-1992 #sequence\_revision 04-Dec-1992 #text\_change 21-Jan-2000  
C;Accession: S04575  
R;Kofler, R.; Noonan, D.J.; Strohal, R.; Balderas, R.S.; Moller, N.P.H.; Dixon, F.J.; Th  
Eur. J. Immunol. 17, 91-95, 1987  
A;Title: Molecular analysis of the murine lupus-associated anti-self response: involve  
A;Reference number: S04573; MUID:87133856; PMID:3102255  
A;Accession: S04575  
A;Molecule type: mRNA  
A;Residues: 1-140 <KOP>  
A;Cross-references: EMBL:X14623; NID:952398; PIDN:CAA32776.1; PID:952399  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotetramer; immunoglobulin  
F;1-19/Domain: signal sequence #status predicted <SIG>  
F;20-140/Product: Ig kappa chain V region (fragment) #status predicted <MAT>  
F;34-117/Domain: immunoglobulin homology <IMM>

Query Match 69.3%; Score 419; DB 2; Length 140;  
Best Local Similarity 67.8%; Pred. No. 1.5e-31;  
Matches 82; Conservative 12; Mismatches 21; Indels 6; Gaps 1;

QY 1 QVQLVQSGAEVWPKGASVKISCKASGYTFTDTHAIHWKQNPQGORLEWIGYFSPGNDDFKY 60

DB 20 QVQLQSGAEVLRAGSVKISCKASGYTFTSYGINWVKQRPQGLEWIGYFSPGNDTKY 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSNLMA-----LNMAYWGQGLTVTVS 114

DB 80 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSNLMA-----LNMAYWGQGLTVTVS 139

QY 115 S 115

DB 140 S 140

## RESULT 23

G28195  
Ig heavy chain V region (anti-haloperidol antibody B) - mouse  
C;Species: Mus musculus (house mouse)  
C;Date: 01-Dec-1989 #sequence\_revision 01-Dec-1989 #text\_change 23-Jul-1999  
C;Accession: G28195  
R;Sherman, M.A.; Deans, R.J.; Bolger, M.B.  
J. Biol. Chem. 263, 4059-4063, 1988  
A;Title: Haloperidol binding to monoclonal antibodies. Hypervariable region amino acid se  
A;Reference number: A28195; MUID:88153717; PMID:3267217  
A;Accession: G28195  
A;Molecule type: mRNA  
A;Residues: 1-120 <SHE>  
A;Cross-references: GB:M19772; NID:9195520; PIDN:AAA38340.1; PID:9195521  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotetramer; immunoglobulin  
F;15-98/Domain: immunoglobulin homology <IMM>

Query Match 69.2%; Score 418.5; DB 2; Length 120;  
Best Local Similarity 68.3%; Pred. No. 1.4e-31;  
Matches 82; Conservative 13; Mismatches 20; Indels 5; Gaps 1;

QY 1 QVQLVQSGAEVWPKGASVKISCKASGYTFTDTHAIHWKQNPQGORLEWIGYFSPGNDDFKY 60

DB 1 QVQLQSGAEVLRAGSVKISCKASGYTFTSYIHWLQRPQGPQEWIGYFPGNVTKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSNLMA-----YWGQGLTVTVSS 115

DB 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSNLMA-----YWGQGLTVTVSS 120

## RESULT 24

S32185  
Ig heavy chain V region - mouse (fragment)  
C;Species: Mus musculus (house mouse)  
C;Date: 06-Jan-1995 #sequence\_revision 06-Jan-1995 #text\_change 23-Jul-1999  
C;Accession: S32185  
R;Zui, S.  
Submitted to the EMBL Data Library, February 1993  
A;Reference number: S32185  
A;Accession: S32185  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-122 <IZU>  
A;Cross-references: EMBL:X70089; NID:9288247; PIDN:CAA49694.1; PID:9288248  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotetramer; immunoglobulin  
F;15-98/Domain: immunoglobulin homology <IMM>

Query Match 69.2%; Score 418.5; DB 2; Length 122;  
Best Local Similarity 66.4%; Pred. No. 1.4e-31;  
Matches 81; Conservative 13; Mismatches 21; Indels 7; Gaps 1;

QY 1 QVQLVQSGAEVWPKGASVKISCKASGYTFTDTHAIHWKQNPQGORLEWIGYFSPGNDDFKY 60

DB 1 QVQLQSGAEVLRAGSVKISCKASGYTFTSYIHWKQRPQGPQEWIGYFPGNVTKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSNLMA-----AYWGQGLTVTV 113

DB 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSNLMA-----AYWGQGLTVTV 120

QY 114 SS 115

DB 121 SA 122

## RESULT 25

A27609  
Ig heavy chain precursor V region (129) - mouse

C:Species: Mus musculus (house mouse)  
C:Date: 15-Dec-1988 #sequence\_revision 30-Jun-1991 #text\_change 23-Jul-1999  
C:Accession: A27609  
R:Klein, D.; Niecupski, J.; Sirlin, S.; Stavnezer, J.  
J. Immunol. 140, 1676-1684, 1988  
A:Title: I.29 lymphoma cells express a nonmutated V-H gene before and after H chain switch  
A:Reference number: A27609; MUID:88154467; PMID:3126234  
A:Accession: A27609  
A:Molecule type: DNA  
A:Residues: 1-139 <KIE>  
A:Cross-references: EMBL:M19401; NID:g195441; PIDN:AAA38303.1; PID:g553992  
C:Genetics:  
A:Introns: 16/1  
C:Superfamily: immunoglobulin V region; immunoglobulin homology  
C:Keywords: heterotetramer; immunoglobulin  
F:1-19/Domain: signal sequence #status predicted <SIG>  
F:20-139/Product: Ig heavy chain V region I29 #status predicted <VAR>  
F:34-117/Domain: immunoglobulin homology <IMM>  
  
Query Match 69.2%; Score 418.5; DB 2; Length 139;  
Best Local Similarity 66.7%; Pred. No. 1.6e-31;  
Matches 80; Conservative 16; Mismatches 19; Indels 5; Gaps 1;  
  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDDFKY 60  
:||| ||| :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||  
Db 20 EVQLQQSGPELVKPGASVKMSCKASGYTFDYYVHWVVKQNGKSLIEWIGYINPYNDYTSY 79  
:  
  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTR-----SLNWAYGQGTLVTVSS 115  
::|||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||  
Db 80 NQKFKGKATLTVDKSSSTAYMQLNSLTSDSAVYCYARYSYYSYAMDYWGQGTSTVTVSS 139  
:  
  
Search completed: July 25, 2005, 08:13:44  
Job time : 26.607 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: July 25, 2005, 08:00:16 ; Search time 105.961 Seconds

Run On: 08:00:16 ; 3  
July 23, 2003,

(without alignments)  
422.176 Million cell updates/sec

Title: US-10-058-069-7-COPY 20 134

Perfect score: 605

Sequence: 1 QVQLVQSGAEVVKPGASVKI.....CTRSLNMAYWGGTLVTVSS 115

Scoring table: BLOSUM62

Gapop 10.0 ; Gapext 0.5

Searched: 1741741 seqs, 388992284 residues

**Total number of hits satisfying chosen parameters: 1741741**

Minimum DB seq length: 0

Maximum DB seq length:	2000000000
Maximum DB seq length:	2000000000

Post-processing: Minimum March 03

Fast-processing: Minimum Match 0%  
Maximum Match 100%

Maximum Match 100%  
Listing first 100 summaries

Database :

Database : **PUBCOMB** Applications: **AA:\***

1:	/cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pcp:*
2:	/cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pcp:*
3:	/cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pcp:*
4:	/cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pcp:*
5:	/cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pcp:*
6:	/cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pcp:*
7:	/cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pcp:*
8:	/cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pcp:*
9:	/cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pcp:*
10:	/cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pcp:*
11:	/cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pcp:*
12:	/cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pcp:*
13:	/cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pcp:*
14:	/cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pcp:*
15:	/cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pcp:*
16:	/cgn2_6/ptodata/1/pubpaa/US10D_PUBCOMB.pcp:*
17:	/cgn2_6/ptodata/1/pubpaa/US10E_PUBCOMB.pcp:*
18:	/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pcp:*
19:	/cgn2_6/ptodata/1/pubpaa/US11A_PUBCOMB.pcp:*
20:	/cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pcp:*
21:	/cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pcp:*
22:	/cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pcp:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Query			Description	
	Score	Match	Length	ID	
1	605	100.0	115	14	US-10-255-478-76
2	543	89.8	115	9	US-09-999-025-1
3	543	89.8	115	9	US-09-999-025-10
4	543	89.8	115	9	US-09-999-040-1
5	543	89.8	115	9	US-09-999-040-10
6	543	89.8	115	10	US-09-998-817-1
7	543	89.8	115	10	US-09-998-817-10
8	543	89.8	115	10	US-09-999-021-1
9	543	89.8	115	10	US-09-999-021-10
10	543	89.8	115	14	US-10-040-997-1
11	543	89.8	115	14	US-10-040-997-10
					Sequence 76, Appl
					Sequence 1, Appl
					Sequence 10, Appl
					Sequence 1, Appl
					Sequence 10, Appl
					Sequence 1, Appl
					Sequence 10, Appl
					Sequence 1, Appl
					Sequence 10, Appl
					Sequence 1, Appl
					Sequence 10, Appl

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85 447 73.9 117 16 US-10-729-441-76 Sequence 76, Appl
86 447 73.9 117 18 US-10-895-135-54 Sequence 54, Appl
87 447 73.9 119 17 US-10-763-424-60 Sequence 60, Appl
88 446.5 73.8 116 18 US-10-837-904-128 Sequence 128, App
89 446 73.6 483 16 US-10-679-820-122 Sequence 122, App
90 445.5 73.6 116 18 US-10-837-904-126 Sequence 126, App
91 445 73.6 115 9 US-09-999-025-3 Sequence 3, Appl
92 445 73.6 115 9 US-09-999-025-11 Sequence 11, Appl
93 445 73.6 115 9 US-09-999-040-3 Sequence 3, Appl
94 445 73.6 115 9 US-09-999-040-11 Sequence 11, Appl
95 445 73.6 115 10 US-09-998-817-3 Sequence 3, Appl
96 445 73.6 115 10 US-09-998-817-11 Sequence 11, Appl
97 445 73.6 115 10 US-09-999-021-3 Sequence 3, Appl
98 445 73.6 115 10 US-09-999-021-11 Sequence 11, Appl
99 445 73.6 115 14 US-10-040-997-3 Sequence 3, Appl
100 445 73.6 115 14 US-10-040-997-11 Sequence 11, Appl

ALIGNMENTS

US-10-255-478-76
; Sequence 76, Application US/10255478
; Publication No. US20030165498A1
; GENERAL INFORMATION:
; APPLICANT: Mezees, Peter S.
; APPLICANT: Richard, Ruth A.
; APPLICANT: Johnson, Kimberly S.
; APPLICANT: Schlom, Jeffrey
; APPLICANT: Kaehmiri, Syed V.S.
; APPLICANT: Shu, Liming
; APPLICANT: Padlan, Eduardo A.
; TITLE OF INVENTION: Composite Antibodies of Humanized Human Subgroup IV Light Chain
; FILE REFERENCE: 37777E
; CURRENT APPLICATION NUMBER: US/10/255,478
; PRIOR FILING DATE: 2002-09-25
; PRIOR APPLICATION NUMBER: US/08/961,309
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; PRIOR APPLICATION NUMBER: US 08/261,354
; PRIOR FILING DATE: 1994-06-16
; PRIOR APPLICATION NUMBER: US 07/964,536
; PRIOR FILING DATE: 1992-10-20
; PRIOR APPLICATION NUMBER: US 07/510,697
; PRIOR FILING DATE: 1990-07-17
; NUMBER OF SEQ ID NOS: 78
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 76
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; NAME/KEY: HuCC49 VH
; LOCATION: 1..115
; OTHER INFORMATION: Humanized CC49 heavy chain variable region with 21/28'CL VH FRs
; FEATURE:
; NAME/KEY: 21/28'CL FR1
; LOCATION: 1..30
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR1
; FEATURE:
; NAME/KEY: CC49 VH CDR1
; LOCATION: 31..35
; OTHER INFORMATION: Murine CC49 heavy chain variable region CDR1
; FEATURE:
; NAME/KEY: 21/28'CL FR2
; LOCATION: 36..49
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR2
; FEATURE:
; NAME/KEY: CC49 VH CDR2
; LOCATION: 50..66
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; OTHER INFORMATION: Murine CC49 heavy chain variable region CDR2
; FEATURE:
; NAME/KEY: 21/28'CL FR3
; LOCATION: 67..98
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR3
; FEATURE:
; NAME/KEY: CC49 VH CDR3
; LOCATION: 99..104
; OTHER INFORMATION: Murine CC49 heavy chain variable region CDR3
; FEATURE:
; NAME/KEY: 21/28'CL FR4
; LOCATION: 105..115
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR4
US-10-255-478-76

Query Match 100.0%; Score 605; DB 14; Length 115;
Best Local Similarity 100.0%; Pred. No. 2.4e-48;
Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHWVKQNPQORLEWIGYFSPGNDDPKY 60
Db 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHWVKQNPQORLEWIGYFSPGNDDPKY 60
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGTSLTVTSS 115
Db 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGTSLTVTSS 115

RESULT 2
US-09-999-025-1
; Sequence 1, Application US/09999025
; Publication No. US20020183497A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,025
; CURRENT FILING DATE: 2001-10-31
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 1
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
; OTHER INFORMATION: Humanized CC49 heavy chain variable region with 21/28'CL VH FRs
; FEATURE:
; NAME/KEY: 21/28'CL FR1
; LOCATION: 1..30
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR1
; FEATURE:
; NAME/KEY: CC49 VH CDR1
; LOCATION: 31..35
; OTHER INFORMATION: Murine CC49 heavy chain variable region CDR1
; FEATURE:
; NAME/KEY: 21/28'CL FR2
; LOCATION: 36..49
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR2
; FEATURE:
; NAME/KEY: CC49 VH CDR2
; LOCATION: 50..66
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RESULT 3

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US-09-999-025-10
; Sequence 10, Application US/09999025
; Publication No. US20020183497A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,025
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-999-025-10
Query Match      89.8%; Score 543; DB 9; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.3e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKONPCQRLEWIGYFSPGNDPFKY 60
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKONPCQRLEWIGYFSPGNDPFKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRLSNMAYWGQGTSLTVSS 115
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRLSNMAYWGQGTSLTVSS 115

RESULT 4
US-09-999-040-10
; Sequence 10, Application US/09999040
; Publication No. US20020193574A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-999-040-10
Query Match      89.8%; Score 543; DB 9; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.3e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKONPCQRLEWIGYFSPGNDPFKY 60
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKONPCQRLEWIGYFSPGNDPFKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRLSNMAYWGQGTSLTVSS 115
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRLSNMAYWGQGTSLTVSS 115

RESULT 4
US-09-999-040-10
; Sequence 1, Application US/09999040
; Publication No. US20020193574A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 1
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
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; LOCATION: 1..115
US-09-999-040-10
Query Match      89.8%; Score 543; DB 9; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.3e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKONPCQRLEWIGYFSPGNDPFKY 60
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKONPCQRLEWIGYFSPGNDPFKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRLSNMAYWGQGTSLTVSS 115
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRLSNMAYWGQGTSLTVSS 115

RESULT 5
US-09-999-040-10
; Sequence 10, Application US/09999040
; Publication No. US20020193574A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-999-040-10
Query Match      89.8%; Score 543; DB 9; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.3e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKONPCQRLEWIGYFSPGNDPFKY 60
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKONPCQRLEWIGYFSPGNDPFKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRLSNMAYWGQGTSLTVSS 115
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRLSNMAYWGQGTSLTVSS 115

RESULT 6
US-09-998-817-1
; Sequence 1, Application US/09998817
; Publication No. US20030004318A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal
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; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-999-021-10

Query Match      89.8%; Score 543; DB 10; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.3e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYFTTDAIHHWKQNPQORLEWIGYFSPGNDDFKY 60
Db 1 QVQLQQSDAELVKPGASVKISKASGYFTTDAIHHWKQNPQORLEWIGYFSPGNDDFKY 60

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNNAYWGQGTSLTVSS 115
Db 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNAYWGQGTSLTVSS 115

RESULT 10
US-10-040-997-1
; Sequence 1, Application US/10040997
; Publication No. US20030013856A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 1
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-10-040-997-1

Query Match      89.8%; Score 543; DB 14; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.3e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYFTTDAIHHWKQNPQORLEWIGYFSPGNDDFKY 60
Db 1 QVQLQQSDAELVKPGASVKISKASGYFTTDAIHHWKQNPQORLEWIGYFSPGNDDFKY 60

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNNAYWGQGTSLTVSS 115
Db 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNAYWGQGTSLTVSS 115

RESULT 11
US-10-040-997-10
; Sequence 10, Application US/10040997
; Publication No. US20030013856A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 1
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-10-040-997-1

Query Match      89.8%; Score 543; DB 14; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.3e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYFTTDAIHHWKQNPQORLEWIGYFSPGNDDFKY 60
Db 1 QVQLQQSDAELVKPGASVKISKASGYFTTDAIHHWKQNPQORLEWIGYFSPGNDDFKY 60

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNNAYWGQGTSLTVSS 115
Db 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNAYWGQGTSLTVSS 115

RESULT 12
US-10-255-478-74
; Sequence 74, Application US/10255478
; Publication No. US20030165498A1
; GENERAL INFORMATION:
; APPLICANT: Mezes, Peter S.
; APPLICANT: Richard, Ruth A.
; APPLICANT: Johnson, Kimberly S.
; APPLICANT: Schlom, Jeffrey
; APPLICANT: Kashmiri, Syed V.S.
; APPLICANT: Shu, Liming
; APPLICANT: Padlan, Eduardo A.
; TITLE OF INVENTION: Composite Antibodies of Humanized Human Subgroup IV Light Chain
; FILE REFERENCE: 37777E
; CURRENT APPLICATION NUMBER: US/10/255,478
; CURRENT FILING DATE: 2002-09-25
; PRIOR APPLICATION NUMBER: US/08/961,309
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; PRIOR APPLICATION NUMBER: US 08/261,354
; PRIOR FILING DATE: 1994-06-16
; PRIOR APPLICATION NUMBER: US 07/964,536
; PRIOR FILING DATE: 1992-10-20
; PRIOR APPLICATION NUMBER: US 07/510,697
; PRIOR FILING DATE: 1990-07-17
; NUMBER OF SEQ ID NOS: 78
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 74
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-10-255-478-74
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Query Match      89.8%; Score 543; DB 14; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.3e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQGRLEWIGYFSPGNDPFKY 60
Db 1 QVQLQSDAELVKPGASVKISKASGYTFTDHAHWKQNPQGRLEWIGYFSPGNDPFKY 60

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDVAVFCTRSLNMAWVGQGLTVTVSS 115
Db 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVVFCTRSLNMAWVGQGLTVTVSS 115

RESULT 13
US-10-336-210-4
; Sequence 4, Application US/10336210
; Publication No. US20030212027A1
; GENERAL INFORMATION:
; APPLICANT: Barbera-Guillen, Emilio
; APPLICANT: Nelson, M. Bud
; TITLE OF INVENTION: Vaccine Formulations and Methods for Immunizing an
; TITLE OF INVENTION: Individual Against Shed Antigen-Specific B Cells
; FILE REFERENCE: 26983-46-1
; CURRENT APPLICATION NUMBER: US/10/336.210
; PRIOR FILING DATE: 2003-01-03
; PRIOR APPLICATION NUMBER: 60/139,521
; PRIOR FILING DATE: 1999-06-16
; PRIOR APPLICATION NUMBER: 09/594,985
; PRIOR FILING DATE: 2000-06-15
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: Patent in version 3.1
; SEQ ID NO 4
; LENGTH: 262
; TYPE: PRT
; ORGANISM: Artificial
; FEATURES:
; OTHER INFORMATION: synthesized
US-10-336-210-4

Query Match      89.8%; Score 543; DB 15; Length 262;
Best Local Similarity 89.6%; Pred. No. 3.1e-42;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQGRLEWIGYFSPGNDPFKY 60
Db 20 QVQLQSDAELVKPGASVKISKASGYTFTDHAHWKQNPQGRLEWIGYFSPGNDPFKY 79

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDVAVFCTRSLNMAWVGQGLTVTVSS 115
Db 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVVFCTRSLNMAWVGQGLTVTVSS 134

RESULT 14
US-09-956-086-2
; Sequence 2, Application US/09956086
; Patent No. US20020155498A1
; GENERAL INFORMATION:
; APPLICANT: FILPULA, DAVID
; APPLICANT: WANG, MAOLIANG
; APPLICANT: SHORR, ROBERT
; APPLICANT: WHITLOW, MARC
; APPLICANT: LEE, LIHSYNG S.
; TITLE OF INVENTION: SINGLE-CHAIN ANTIGEN-BINDING PROTEINS
; TITLE OF INVENTION: CAPABLE OF GLYCOSYLATION, PRODUCTION AND USES THEREOF
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
; ADDRESSSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
; STREET: 1100 NEW YORK AVE., NW, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
```

```
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/956.086
FILING DATE: 20-Sep-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/069,821
FILING DATE: <Unknown>
APPLICATION NUMBER: US 60/063,074
FILING DATE: 27-OCT-1997
APPLICATION NUMBER: US 60/050,472
FILING DATE: 23-JUN-1997
APPLICATION NUMBER: US 60/044,449
FILING DATE: 30-APR-1997
ATTORNEY/AGENT INFORMATION:
NAME: KIM, JUDITH U.
REGISTRATION NUMBER: 40,679
REFERENCE/DOCKET NUMBER: 0977.2280003
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)371-2600
TELEFAX: (202)371-2540
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 249 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-956-086-2

Query Match      89.3%; Score 540; DB 9; Length 249;
Best Local Similarity 88.7%; Pred. No. 5.6e-42;
Matches 102; Conservative 6; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQGRLEWIGYFSPGNDPFKY 60
Db 132 QVQLQSDAELVKPGASVKISKASGYTFTDHAHWKQNPQGRLEWIGYFSPGNDPFKY 191

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDVAVFCTRSLNMAWVGQGLTVTVSS 115
Db 192 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVVFCTRSLNMAWVGQGLTVTVSN 246

RESULT 15
US-09-956-087-2
; Sequence 2, Application US/09956087
; Patent No. US20020161201A1
; GENERAL INFORMATION:
; APPLICANT: FILPULA, DAVID
; APPLICANT: WANG, MAOLIANG
; APPLICANT: SHORR, ROBERT
; APPLICANT: WHITLOW, MARC
; APPLICANT: LEE, LIHSYNG S.
; TITLE OF INVENTION: SINGLE-CHAIN ANTIGEN-BINDING PROTEINS
; TITLE OF INVENTION: CAPABLE OF GLYCOSYLATION, PRODUCTION AND USES THEREOF
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
; ADDRESSSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
; STREET: 1100 NEW YORK AVE., NW, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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; FILING DATE: 23-JUN-1997
; APPLICATION NUMBER: US 60/063,074
; FILING DATE: 27-OCT-1997
; APPLICATION NUMBER: US 60/067,341
; FILING DATE: 02-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: JORGE A. GOLDSTEIN
; REGISTRATION NUMBER: 29,021
; REFERENCE/DOCKET NUMBER: 0977.1840002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-371-2600
; TELEFAX: 202-371-2540
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; BEST LOCAL SIMILARITY 89.1%; Score 539; DB 9; Length 241;
; Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0;
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128 QVLQQSDAELVKPGASVKISCKASGYTFDTHAIHWKQNPEGCGLEWIGYFSPGNDDFKY 187
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Qy 61 NERFGKATLTADTSASTAYVELLSRSEDYVFCTRSLNMAWGGTLVTVS 114
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188 NERFGKATLTADKSSYAVQLNSLTSSESAVYFCTRSLNMAWGGTSTVTVS 241
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RESULT 17
US-09-791-540-6
; Sequence 6, Application US/09791540
; Patent No. US20020098192A1
; GENERAL INFORMATION:
; APPLICANT: WHITLOW, MARC
; SHORR, ROBERT G.L.
; FILPULA, DAVID R.
; LEE, LIHSYNG S.
; TITLE OF INVENTION: POLYALKYLENE OXIDE-MODIFIED SINGLE CHAIN
POLYPEPTIDES
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: STERNER, KESSLER, GOLDSTEIN & FOX P.L.L.C.
; STREET: 1100 NEW YORK AVENUE, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/791,540
; FILING DATE: 26-Feb-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/069,842
; FILING DATE: 1998-04-30
; APPLICATION NUMBER: US 60/050,472
; FILING DATE: 23-JUN-1997
; APPLICATION NUMBER: US 60/063,074
; FILING DATE: 27-OCT-1997
; APPLICATION NUMBER: US 60/067,341
; FILING DATE: 02-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: JORGE A. GOLDSTEIN

```

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;
; REGISTRATION NUMBER: 29,021
; REFERENCE/DOCKET NUMBER: 0977.1840002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-371-2600
; TELEFAX: 202-371-2540
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 6:
US-09-791-540-6

Query Match      89.1%; Score 539; DB 9; Length 241;
Best Local Similarity 89.5%; Pred. No. 6.7e-42;
Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0

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Db 188 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTESLNAVYWGQGTITVTS 241

RESULT 18
US-10-915-069-6
; Sequence 6, Application US/10915069
; Publication No. US20050008650A1
; GENERAL INFORMATION:
; APPLICANT: WHITLOW, MARC
; SHORR, ROBERT G.L.
; PILPULA, DAVID R.
; LEE, LHSYNG S.
; TITLE OF INVENTION: POLYALKYLENE OXIDE-MODIFIED SINGLE CHAIN
; POLYPEPTIDES
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
; STREET: 1100 NEW YORK AVENUE, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/915,069
; FILING DATE: 10-Aug-2004
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/791,540
; FILING DATE: 26-Feb-2001
; APPLICATION NUMBER: 09/069,842
; FILING DATE: 1998-04-30
; APPLICATION NUMBER: US 60/050,472
; FILING DATE: 23-JUN-1997
; APPLICATION NUMBER: US 60/063,074
; FILING DATE: 27-OCT-1997
; APPLICATION NUMBER: US 60/067,341
; FILING DATE: 02-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: JORGE A. GOLDSTEIN
; REGISTRATION NUMBER: 29,021
; REFERENCE/DOCKET NUMBER: 0977.1840002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-371-2600
; TELEFAX: 202-371-2540

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; MOLECULE TYPE: protein
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US-10-909-948-6

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Best Local Similarity 89.5%; Pred. No. 6.7e-42;
Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

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DB 128 QVQLQSQDAELVKPGASVKISKASGYTFTDHAHVVKNQPNQORLEWIGYFSPGNDDFKY 187

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSINMAYWGQGLTVTVS 114
DB 188 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTRSINMAYWGQGLTVTVS 241

RESULT 20
US-09-791-578-4
; Sequence 4, Application US/09791578
; Patent No. US20020061307A1
; GENERAL INFORMATION:
; APPLICANT: WHITLOW, MARC
; SHORR, ROBERT G.L.
; FILPULA, DAVID R.
; LEE, LIHSYNG S.
; TITLE OF INVENTION: POLYALKYLENE OXIDE-MODIFIED SINGLE CHAIN
; POLYPEPTIDES
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
; STREET: 1100 NEW YORK AVENUE, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/791,578
; FILING DATE: 26-Feb-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/069,842
; FILING DATE: <Unknown>
; APPLICATION NUMBER: US 60/050,472
; FILING DATE: 23-JUN-1997
; APPLICATION NUMBER: US 60/063,074
; FILING DATE: 27-OCT-1997
; APPLICATION NUMBER: US 60/067,341
; FILING DATE: 02-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: JORGE A. GOLDSTEIN
; REGISTRATION NUMBER: 29,021
; REFERENCE/DOCKET NUMBER: 0977.1840002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-371-2600
; TELEFAX: 202-371-2540
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 257 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-791-578-4

Query Match      89.1%; Score 539; DB 9; Length 257;
Best Local Similarity 89.5%; Pred. No. 7.1e-42;
Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

US-09-791-578-4

Query Match      89.1%; Score 539; DB 9; Length 257;
Best Local Similarity 89.5%; Pred. No. 7.1e-42;
Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

US-09-791-578-4
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Db 192 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNAYWGQGTSTVTS 245

RESULT 22

US-09-983-580-2

; Sequence 2, Application US/09983580

; Patent No. US20020151061A1

; GENERAL INFORMATION:

; APPLICANT: Wang, Maoliang

; APPLICANT: Filpula, David R.

; APPLICANT: Whitlow, Marc D.

; TITLE OF INVENTION: No. US20020151061A1el Method for Targeted Delivery of Nucleic Acid

; FILE REFERENCE: 0977.2300002

; CURRENT APPLICATION NUMBER: US/09/983,580

; CURRENT FILING DATE: 2001-10-25

; PRIOR APPLICATION NUMBER: 09/420,592

; PRIOR FILING DATE: 1999-10-19

; PRIOR APPLICATION NUMBER: 60/104,949

; PRIOR FILING DATE: 1998-10-20

; NUMBER OF SEQ ID NOS: 13

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 2

; LENGTH: 257

; TYPE: PRT

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence: CC49/218 sFv

US-09-983-580-2

Query Match 89.1%; Score 539; DB 9; Length 257;

Best Local Similarity 89.5%; Pred. No. 7,1e-42;

Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYFTDTHAIHWVKQNPQGLEWIGYFSPGNDDFKY 60

Db 132 QVQLQSDAELVKPGASVKISKASGYFTDTHAIHWVKQNPQGLEWIGYFSPGNDDFKY 191

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNNAYWGQGTSTVTS 114

Db 192 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNAYWGQGTSTVTS 245

RESULT 23

US-09-985-442-2

; Sequence 2, Application US/09985442

; Patent No. US20020156248A1

; GENERAL INFORMATION:

; APPLICANT: Filpula, David R.

; APPLICANT: Wang, Maoliang

; APPLICANT: Whitlow, Marc D.

; TITLE OF INVENTION: No. US20020156248A1el Method for Targeted Delivery of Nucleic Acid

; FILE REFERENCE: 0977.2300003

; CURRENT APPLICATION NUMBER: US/09/985,442

; CURRENT FILING DATE: 2001-11-02

; PRIOR APPLICATION NUMBER: 09/420,592

; PRIOR FILING DATE: 1999-10-19

; PRIOR APPLICATION NUMBER: 60/104,949

; PRIOR FILING DATE: 1998-10-20

; NUMBER OF SEQ ID NOS: 13

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 2

; LENGTH: 257

; TYPE: PRT

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence: CC49/218 sFv

US-09-985-442-2

Query Match 89.1%; Score 539; DB 9; Length 257;

Best Local Similarity 89.5%; Pred. No. 7,1e-42;

Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYFTDTHAIHWVKQNPQGLEWIGYFSPGNDDFKY 60

Db 132 QVQLQSDAELVKPGASVKISKASGYFTDTHAIHWVKQNPQGLEWIGYFSPGNDDFKY 191

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNNAYWGQGTSTVTS 114

Db 192 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNAYWGQGTSTVTS 245

RESULT 24

US-10-915-069-4

; Sequence 4, Application US/10915069

; Publication No. US20050008650A1

; GENERAL INFORMATION:

; APPLICANT: WHITLOW, MARC

; APPLICANT: SHORR, ROBERT G.L.

; APPLICANT: FILPULA, DAVID R.

; APPLICANT: LEE, LIHSYNG S.

; TITLE OF INVENTION: POLYALKYLENE OXIDE-MODIFIED SINGLE CHAIN POLYPEPTIDES

; NUMBER OF SEQUENCES: 6

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

; STREET: 1100 NEW YORK AVENUE, SUITE 600

; CITY: WASHINGTON

; STATE: DC

; COUNTRY: USA

; ZIP: 20005

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/915,069

; FILING DATE: 10-Aug-2004

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US/09/791,540

; FILING DATE: 26-Feb-2001

; APPLICATION NUMBER: 09/069,842

; FILING DATE: 1998-04-30

; APPLICATION NUMBER: US 60/050,472

; FILING DATE: 23-JUN-1997

; APPLICATION NUMBER: US 60/063,074

; FILING DATE: 27-OCT-1997

; APPLICATION NUMBER: US 60/067,341

; FILING DATE: 02-DEC-1997

; ATTORNEY/AGENT INFORMATION:

; NAME: JORGE A. GOLDSTEIN

; REGISTRATION NUMBER: 29,021

; REFERENCE/DOCKET NUMBER: 0977.1840002

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 202-371-2800

; TELEFAX: 202-371-2540

; INFORMATION FOR SEQ ID NO: 4:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 257 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 4:

US-10-915-069-4

Query Match 89.1%; Score 539; DB 17; Length 257;

Best Local Similarity 89.5%; Pred. No. 7,1e-42;

Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISKASGYFTDTHAIHWVKQNPQGLEWIGYFSPGNDDFKY 60

Db 132 QVQLQSDAELVKPGASVKISKASGYFTDTHAIHWVKQNPQGLEWIGYFSPGNDDFKY 191

Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNNAYWGQGTSTVTS 114

DB 192 NERFKGKATLTADKSSSTAYVOLNSLTSDSAVYFCTRSLNWAYWGQGTSTVTS 245

## RESULT 25

US-10-909-948-4  
; Sequence 4, Application US/10909948  
; Publication NO. US20050048064A1  
; GENERAL INFORMATION:  
; APPLICANT: WHITLOW, MARC  
; SHORR, ROBERT G.L.  
; FILPULA, DAVID R.  
; LEE, LIHSYNG S.  
; TITLE OF INVENTION: POLYALKYLENE OXIDE-MODIFIED SINGLE CHAIN  
; POLYPEPTIDES  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
; STREET: 1100 NEW YORK AVENUE, SUITE 600  
; CITY: WASHINGTON  
; STATE: DC  
; COUNTRY: USA  
; ZIP: 20005  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/909,948  
; FILING DATE: 02-Aug-2004  
; CLASSIFICATION: <Unknown>  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/09/791,578  
; FILING DATE: 26-Feb-2001  
; APPLICATION NUMBER: 09/069,842  
; FILING DATE: <Unknown>  
; APPLICATION NUMBER: US 60/050,472  
; FILING DATE: 23-JUN-1997  
; APPLICATION NUMBER: US 60/063,074  
; FILING DATE: 27-OCT-1997  
; APPLICATION NUMBER: US 60/067,341  
; FILING DATE: 02-DEC-1997  
; ATTORNEY/AGENT INFORMATION:  
; NAME: JORGE A. GOLDSTEIN  
; REGISTRATION NUMBER: 29,021  
; REFERENCE/DOCKET NUMBER: 0977.1840002  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 202-371-2600  
; TELEFAX: 202-371-2540  
; INFORMATION FOR SEQ ID NO: 4:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 257 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; SEQUENCE DESCRIPTION: SEQ ID NO: 4:  
US-10-909-948-4

Query Match 89.1%; Score 539; DB 17; Length 257;  
Best Local Similarity 89.5%; Pred. No. 7.le-42;  
Matches 102; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVOLVQSGAEVVKPGASVKISCKASGYTFDRAIHVKONPGORLEWIGYFSGNDDFKY 60  
DB 132 QVOLQSDRELVKPGASVKISCKASGYTFDRAIHVKONPGGLEWIGYFSGNDDFKY 191  
QY 61 NERFKGKATLTADTSASTAYVELSSLRSEDYAVYFCTRSLNWAYWGQGTSTVTS 114  
DB 192 NERFKGKATLTADKSSSTAYVOLNSLTSDSAVYFCTRSLNWAYWGQGTSTVTS 245

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Job time : 107.961 secs

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Copyright (c) 1993 - 2005 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: July 25, 2005, 07:37:36 ; Search time 30.131 Seconds

(without alignments)

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Title: us-10-058-069-7\_COPY\_20\_134

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Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

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- 6: /cgn2\_6/ptodata/1/iaa/backfile1 pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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4	543	89.8	115	3	US-09-025-203-1
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57	539	89.1	248	1	US-08-323-445A-6
58	539	89.1	248	1	US-08-515-903A-6
59	539	89.1	248	5	PCT-US95-12840-6
60	539	89.1	257	3	US-09-420-592A-2
61	539	89.1	257	4	US-09-985-442-2
62	539	89.1	257	4	US-09-983-580-2
63	539	89.1	257	4	US-09-791-540-4
64	539	89.1	262	1	US-08-323-445A-4
65	539	89.1	262	1	US-08-515-903A-4
66	539	89.1	262	5	PCT-US95-12840-4
67	539	89.1	264	1	US-08-323-445A-8
68	539	89.1	264	1	US-08-515-903A-8
69	539	89.1	264	5	PCT-US95-12840-8
70	539	89.1	269	3	US-09-420-592A-4
71	539	89.1	269	4	US-09-985-442-4
72	539	89.1	269	4	US-09-983-580-4
73	536	88.6	275	3	US-08-463-903-17
74	536	88.6	275	3	US-07-935-695-17
75	536	88.6	280	3	US-08-463-903-10
76	536	88.6	280	3	US-07-935-695-10
77	536	88.6	282	3	US-08-463-903-12
78	536	88.6	282	3	US-08-463-903-15
79	536	88.6	282	3	US-07-935-695-12
80	536	88.6	282	3	US-07-935-695-15
81	534	88.3	134	4	US-08-961-309-47
82	534	88.3	246	4	US-09-791-540-2
83	534	88.3	260	3	US-08-463-903-2
84	534	88.3	260	3	US-07-935-695-2
85	534	88.3	260	4	US-08-961-309-64
86	533.5	88.2	274	4	US-08-961-309-66
87	533.5	88.2	284	4	US-08-961-309-70
88	482.5	79.8	116	3	US-09-244-592-1
89	482.5	79.8	244	4	US-09-940-391-1
90	482.5	79.8	244	4	US-09-232-290-33
91	478.5	79.1	115	4	US-08-822-028-8
92	478	79.0	134	2	US-08-479-285-8
93	478	79.0	134	3	US-08-479-285-8
94	478	79.0	134	4	US-09-503-653A-8
95	477	78.8	134	2	US-08-822-028-10
96	477	78.8	134	3	US-08-479-285-10
97	477	78.8	134	4	US-09-503-653A-10
98	473.5	78.3	114	3	US-09-344-587-10
99	471.5	77.9	133	2	US-08-822-028-6
100	471.5	77.9	133	2	US-08-822-028-30

## ALIGNMENTS

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RESULT 1
US-08-961-309-76
; Sequence 76, Application US/08961309
; Patent No. 6495137
; GENERAL INFORMATION:
; APPLICANT: Mezes, Peter S.
; APPLICANT: Richard, Ruth A.
; APPLICANT: Johnson, Kimberly S.
; APPLICANT: Schlom, Jeffrey
; APPLICANT: Kashmiri, Syed V.S.
; APPLICANT: Shu, Liming
; APPLICANT: Padlan, Eduardo A.
; TITLE OF INVENTION: Composite Antibodies of Humanized Human Subgroup IV Light Chain
; TITLE OF INVENTION: Capable of Binding to TAG-72
; FILE REFERENCE: 37777E
; CURRENT APPLICATION NUMBER: US/08/961,309
; CURRENT FILING DATE: 1997-10-30
; EARLIER APPLICATION NUMBER: US 60/030,173
; EARLIER FILING DATE: 1996-10-31
; EARLIER APPLICATION NUMBER: US 08/261,354
; EARLIER FILING DATE: 1994-06-16
; EARLIER APPLICATION NUMBER: US 07/964,536
; EARLIER FILING DATE: 1992-10-20
; EARLIER APPLICATION NUMBER: US 07/510,697
; EARLIER FILING DATE: 1990-07-17
; NUMBER OF SEQ ID NOS: 78
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 76
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; NAME/KEY: HuCC49 VH
; LOCATION: 1..115
; OTHER INFORMATION: Humanized CC49 heavy chain variable region with 21/28'CL VH FRs
; FEATURE:
; NAME/KEY: 21/28'CL FR1
; LOCATION: 1..30
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR1
; FEATURE:
; NAME/KEY: CC49 VH CDR1
; LOCATION: 31..35
; OTHER INFORMATION: Murine CC49 heavy chain variable region CDR1
; FEATURE:
; NAME/KEY: 21/28'CL FR2
; LOCATION: 36..49
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR2
; FEATURE:
; NAME/KEY: CC49 VH CDR2
; LOCATION: 50..66
; OTHER INFORMATION: Murine CC49 heavy chain variable region CDR2
; FEATURE:
; NAME/KEY: 21/28'CL FR3
; LOCATION: 67..98
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR3
; FEATURE:
; NAME/KEY: CC49 VH CDR3
; LOCATION: 99..104
; OTHER INFORMATION: Murine CC49 heavy chain variable region CDR3
; FEATURE:
; NAME/KEY: 21/28'CL FR4
; LOCATION: 105..115
; OTHER INFORMATION: Human 21/28'CL heavy chain variable region FR4
; US-08-961-309-76

Query Match      100.0%; Score 605; DB 4; Length 115;
Best Local Similarity 100.0%; Pred. No. 1e-53;
Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

US-08-961-309-76
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QY      1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDPKY 60
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Db      1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDPKY 60
      |||

QY      61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGTTLTVSS 115
      |||
Db      61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGTTLTVSS 115
      |||

RESULT 2
US-09-830-748B-14
; Sequence 14, Application US/09830748B
; Patent No. 6818749
; GENERAL INFORMATION:
; APPLICANT: The Government of the United States of America, as represented by The
; APPLICANT: Secretary of the Department of Health and Human Services
; APPLICANT: Kashmiri, Syed V.S.
; APPLICANT: Padlan, Eduardo A.
; APPLICANT: Jeffery, Schlom
; TITLE OF INVENTION: VARIANTS OF HUMANIZED ANTI-CARCINOMA MONOCLONAL ANTIBODY CC49
; FILE REFERENCE: 4239-61725
; CURRENT APPLICATION NUMBER: US/09/830,748B
; CURRENT FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: PCT/ US99/25552
; PRIOR FILING DATE: 1999-10-29
; PRIOR APPLICATION NUMBER: US 60/106,757
; PRIOR FILING DATE: 1998-11-02
; PRIOR APPLICATION NUMBER: US 60/106,534
; PRIOR FILING DATE: 1998-10-31
; NUMBER OF SEQ ID NOS: 44
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 14
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Mouse and Human Chimeric Antibody Heavy Chain Variable Region
; US-09-830-748B-14

Query Match      100.0%; Score 605; DB 4; Length 115;
Best Local Similarity 100.0%; Pred. No. 1e-53;
Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDPKY 60
      |||
Db      1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDPKY 60
      |||

QY      61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGTTLTVSS 115
      |||
Db      61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGTTLTVSS 115
      |||

RESULT 3
US-08-819-0333-2
; Sequence 2, Application US/08819033
; Patent No. 5917021
; GENERAL INFORMATION:
; APPLICANT: LEE, LIHSYNG STANFORD
; TITLE OF INVENTION: STABILIZED MONOMERIC PROTEIN
; TITLE OF INVENTION: COMPOSITIONS
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
; STREET: 1100 NEW YORK AVE., NW, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
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SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/819,033  
FILING DATE: 17-MAR-1997  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/417,855  
FILING DATE: 07-APRIL-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: BUGAISKY, LAWRENCE B.  
REGISTRATION NUMBER: 35,086  
REFERENCE/DOCKET NUMBER: 0977.2220001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202) 371-2600  
TELEFAX: (202) 371-2540  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 115 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: not relevant  
MOLECULE TYPE: peptide  
US-08-819-033-2

Query Match 89.8%; Score 543; DB 2; Length 115;  
Best Local Similarity 89.8%; Pred. No. 1.8e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDTHAIHWKQNPQGLRWIGVYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISCKASGYTFTDTHAIHWKQNPQGLRWIGVYFSPGNDDFKY 60  
  
QY 61 NERFKGKATLTADTSAITAYVELSLRSEDYAVYFCTRSINLMAYWQGGLTVTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRSINLMAYWQGGLTVTVSS 115

RESULT 4  
US-09-025-203-1  
Sequence 1, Application US/09025203  
Patent No. 6348581  
GENERAL INFORMATION:  
APPLICANT: Anderson, W.H. Kerr  
APPLICANT: Tempest, Philip R.  
APPLICANT: Carr, Frank J.  
APPLICANT: Harrie, William J.  
APPLICANT: Armour, Kathryn  
TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies  
FILE REFERENCE:  
CURRENT APPLICATION NUMBER: US/09/025,203  
CURRENT FILING DATE: 1998-02-18  
EARLIER APPLICATION NUMBER: PCT US97/19641  
EARLIER FILING DATE: 1997-10-30  
EARLIER APPLICATION NUMBER: US 60/030,173  
EARLIER FILING DATE: 1996-10-31  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: Microsoft Word 97 SR-2  
SEQ ID NO 1  
LENGTH: 115  
TYPE: PRT  
ORGANISM: Mus musculus  
FEATURE:  
NAME/KEY: Murine CC49 VH  
LOCATION: 1..115  
US-09-025-203-1

Query Match 89.8%; Score 543; DB 3; Length 115;  
Best Local Similarity 89.6%; Pred. No. 1.8e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDTHAIHWKQNPQGLRWIGVYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISCKASGYTFTDTHAIHWKQNPQGLRWIGVYFSPGNDDFKY 60

QY 61 NERFKGKATLTADTSAITAYVELSLRSEDYAVYFCTRSINLMAYWQGGLTVTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRSINLMAYWQGGLTVTVSS 115

RESULT 5  
US-09-025-203-10  
Sequence 10, Application US/09025203  
Patent No. 6348581  
GENERAL INFORMATION:  
APPLICANT: Anderson, W.H. Kerr  
APPLICANT: Tempest, Philip R.  
APPLICANT: Carr, Frank J.  
APPLICANT: Harrie, William J.  
APPLICANT: Armour, Kathryn  
TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies  
FILE REFERENCE:  
CURRENT APPLICATION NUMBER: US/09/025,203  
CURRENT FILING DATE: 1998-02-18  
EARLIER APPLICATION NUMBER: PCT US97/19641  
EARLIER FILING DATE: 1997-10-30  
EARLIER APPLICATION NUMBER: US 60/030,173  
EARLIER FILING DATE: 1996-10-31  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: Microsoft Word 97 SR-2  
SEQ ID NO 10  
LENGTH: 115  
TYPE: PRT  
ORGANISM: Mus musculus  
FEATURE:  
NAME/KEY: Murine CC49 VH  
LOCATION: 1..115  
US-09-025-203-10

Query Match 89.8%; Score 543; DB 3; Length 115;  
Best Local Similarity 89.6%; Pred. No. 1.8e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDTHAIHWKQNPQGLRWIGVYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISCKASGYTFTDTHAIHWKQNPQGLRWIGVYFSPGNDDFKY 60  
  
QY 61 NERFKGKATLTADTSAITAYVELSLRSEDYAVYFCTRSINLMAYWQGGLTVTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRSINLMAYWQGGLTVTVSS 115

RESULT 6  
US-08-961-309-74  
Sequence 74, Application US/08961309  
Patent No. 6495137  
GENERAL INFORMATION:  
APPLICANT: Mezes, Peter S.  
APPLICANT: Richard, Ruth A.  
APPLICANT: Johnson, Kimberly S.  
APPLICANT: Schlom, Jeffrey  
APPLICANT: Kashmiri, Syed V.S.  
APPLICANT: Shu, Liming  
APPLICANT: Badlan, Eduardo A.  
TITLE OF INVENTION: Composite Antibodies of Humanized Human Subgroup IV Light Chain  
FILE REFERENCE: 37777E  
CURRENT APPLICATION NUMBER: US/08/961,309  
CURRENT FILING DATE: 1997-10-30  
EARLIER APPLICATION NUMBER: US 60/030,173  
EARLIER FILING DATE: 1996-10-31  
EARLIER APPLICATION NUMBER: US 08/261,354  
EARLIER FILING DATE: 1994-06-16  
EARLIER APPLICATION NUMBER: US 07/964,536  
EARLIER FILING DATE: 1992-10-20  
EARLIER APPLICATION NUMBER: US 07/510,697  
EARLIER FILING DATE: 1990-07-17



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QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDRAIHVWVKQNPQRLEWIGYFSGNDDFKY 60
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDRAIHVWVKQNPQGLEWIGYFSGNDDFKY 60
QY 61 NERFQKATLTADTASTAYVELSSLRSSEDTAVYFCTRSLNMYWGQGLTVTVSS 115
DB 61 NERFQKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNMYWGQGLTVTVSS 115

RESULT 10
US-09-999-025-10
; Sequence 10, Application US/09999025
; Patent No. 6737061
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,025
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-999-025-10

Query Match 89.8%; Score 543; DB 4; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.8e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-999-025-10

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDRAIHVWVKQNPQRLEWIGYFSGNDDFKY 60
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDRAIHVWVKQNPQGLEWIGYFSGNDDFKY 60
QY 61 NERFQKATLTADTASTAYVELSSLRSSEDTAVYFCTRSLNMYWGQGLTVTVSS 115
DB 61 NERFQKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNMYWGQGLTVTVSS 115

RESULT 11
US-10-040-997-1
; Sequence 1, Application US/10040997
; Patent No. 6752990
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-10-040-997-1

Query Match 89.8%; Score 543; DB 4; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.8e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-10-040-997-1
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DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDRAIHVWVKQNPQGLEWIGYFSGNDDFKY 60
QY 61 NERFQKATLTADTASTAYVELSSLRSSEDTAVYFCTRSLNMYWGQGLTVTVSS 115
DB 61 NERFQKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNMYWGQGLTVTVSS 115

RESULT 12
US-10-040-997-10
; Sequence 10, Application US/10040997
; Patent No. 6752990
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-10-040-997-10

Query Match 89.8%; Score 543; DB 4; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.8e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-10-040-997-10

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDRAIHVWVKQNPQRLEWIGYFSGNDDFKY 60
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDRAIHVWVKQNPQGLEWIGYFSGNDDFKY 60
QY 61 NERFQKATLTADTASTAYVELSSLRSSEDTAVYFCTRSLNMYWGQGLTVTVSS 115
DB 61 NERFQKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNMYWGQGLTVTVSS 115

RESULT 13
US-09-999-040-1
; Sequence 1, Application US/09999040
; Patent No. 6753152
```

```
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 1
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-999-040-1

Query Match      89.8%; Score 543; DB 4; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.8e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 60
DB 1 QVQLQSDAEIVKPGASVKISCKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDVAVYFCTRSLNWAYWGQGTSLTVTSS 115
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNWAYWGQGTSLTVTSS 115

RESULT 14
US-09-999-040-10
; Sequence 10, Application US/09999040
; Patent No. 6753152
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 10
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 1
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,817
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US/09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 1
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-998-817-1

Query Match      89.8%; Score 543; DB 4; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.8e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 60
DB 1 QVQLQSDAEIVKPGASVKISCKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDVAVYFCTRSLNWAYWGQGTSLTVTSS 115
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNWAYWGQGTSLTVTSS 115

RESULT 16
US-09-998-817-10
; Sequence 10, Application US/09998817
; Patent No. 6753420
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09998817
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US/09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 1
; LENGTH: 115
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VH
; LOCATION: 1..115
US-09-998-817-1

Query Match      89.8%; Score 543; DB 4; Length 115;
Best Local Similarity 89.6%; Pred. No. 1.8e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 60
DB 1 QVQLQSDAEIVKPGASVKISCKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDVAVYFCTRSLNWAYWGQGTSLTVTSS 115
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNWAYWGQGTSLTVTSS 115
```

; CURRENT APPLICATION NUMBER: US/09/998,817  
; CURRENT FILING DATE: 2001-10-31  
; PRIOR APPLICATION NUMBER: US/09/025,203  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: PCT US97/19641  
; PRIOR FILING DATE: FILING DATE: 1997-10-30  
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: US 60/030,173  
; PRIOR FILING DATE: FILING DATE: 1996-10-31  
; NUMBER OF SEQ ID NOS: 33  
; SOFTWARE: Microsoft word 97 SR-2  
; SEQ ID NO 10  
; LENGTH: 115  
; TYPE: PRT  
; ORGANISM: Mus musculus  
; FEATURE:  
; NAME/KEY: Murine CC49 VH  
; LOCATION: 1..115  
US-09-998-817-10

Query Match 89.8%; Score 543; DB 4; Length 115;  
Best Local Similarity 89.6%; Pred. No. 1.8e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
QY 61 NERFKGKATLTADTASATYAVLSLSRSDTAVYFCTSLNMYWGQGTFLVTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTSLNMYWGQGTSLTVSS 115

RESULT 17  
US-08-822-028-4  
; Sequence 4, Application US/08822028  
; Patent No. 5993813  
; GENERAL INFORMATION:  
; APPLICANT: MEZES, PETER S  
; APPLICANT: GOURLIE, BRIAN B  
; APPLICANT: RIXON, MARK W  
; APPLICANT: ANDERSON, WH KERR  
; APPLICANT: KAPLAN, DONALD A  
; APPLICANT: SCHOLM, JEFFREY  
; TITLE OF INVENTION: A NOVEL FAMILY OF HIGH AFFINITY,  
; TITLE OF INVENTION: MODIFIED ANTIBODIES FOR CANCER TREATMENT  
; NUMBER OF SEQUENCES: 74  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: DUANE C ULMER  
; STREET: P.O. BOX 1967  
; CITY: MIDLAND  
; STATE: MICHIGAN  
; COUNTRY: USA  
; ZIP: 48641-1967  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/822,028  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 08/040,687  
; FILING DATE:  
; ATTORNEY/AGENT INFORMATION:  
; NAME: ULMER, DUANE C  
; REGISTRATION NUMBER: 34,941  
; REFERENCE/DOCKET NUMBER: C-37,075C  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (517) 636-8104  
; INFORMATION FOR SEQ ID NO: 4:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 115 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: double  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-822-028-29

Query Match 89.8%; Score 543; DB 2; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.2e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
QY 61 NERFKGKATLTADTASATYAVLSLSRSDTAVYFCTSLNMYWGQGTFLVTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTSLNMYWGQGTSLTVSS 115

; LENGTH: 134 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-822-028-4  
Query Match 89.8%; Score 543; DB 2; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.2e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
DB 20 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 79  
QY 61 NERFKGKATLTADTASATYAVLSLSRSDTAVYFCTSLNMYWGQGTFLVTVSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTSLNMYWGQGTSLTVSS 134

RESULT 18  
US-08-822-028-29  
; Sequence 29, Application US/08822028  
; Patent No. 5993813  
; GENERAL INFORMATION:  
; APPLICANT: MEZES, PETER S  
; APPLICANT: GOURLIE, BRIAN B  
; APPLICANT: RIXON, MARK W  
; APPLICANT: ANDERSON, WH KERR  
; APPLICANT: KAPLAN, DONALD A  
; APPLICANT: SCHOLM, JEFFREY  
; TITLE OF INVENTION: A NOVEL FAMILY OF HIGH AFFINITY,  
; TITLE OF INVENTION: MODIFIED ANTIBODIES FOR CANCER TREATMENT  
; NUMBER OF SEQUENCES: 74  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: DUANE C ULMER  
; STREET: P.O. BOX 1967  
; CITY: MIDLAND  
; STATE: MICHIGAN  
; COUNTRY: USA  
; ZIP: 48641-1967  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/822,028  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 08/040,687  
; FILING DATE:  
; ATTORNEY/AGENT INFORMATION:  
; NAME: ULMER, DUANE C  
; REGISTRATION NUMBER: 34,941  
; REFERENCE/DOCKET NUMBER: C-37,075C  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (517) 636-8104  
; INFORMATION FOR SEQ ID NO: 29:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 134 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: double  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-822-028-29

Query Match 89.8%; Score 543; DB 2; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.2e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 60  
DB 20 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKQNPQORLEWIGYFSPGNDDFKY 79  
QY 61 NERFKGKATLTADTASATYAVLSLSRSDTAVYFCTSLNMYWGQGTFLVTVSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTSLNMYWGQGTSLTVSS 134

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Db 20 QVQLQSDAELVKPGASVKISKASGYTFTDHAHWKQNPQGLEWIGYFSPGNDDPKY 79
QY 61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTRSLNMYWGQGTLTVSS 115
Db 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNMYWGQGTSTVSS 134

RESULT 19
US-08-479-285-4
; Sequence 4, Application US/08479285
; Patent No. 6207815
; GENERAL INFORMATION:
; APPLICANT: MEZES, PETER S
; APPLICANT: GOURLIE, BRIAN B
; APPLICANT: RIXON, MARK W
; APPLICANT: ANDERSON, WH KERR
; APPLICANT: KAPLAN, DONALD A
; APPLICANT: SCHLOM, JEFFREY
; TITLE OF INVENTION: A NOVEL FAMILY OF HIGH AFFINITY,
; MODIFIED ANTIBODIES FOR CANCER TREATMENT
; NUMBER OF SEQUENCES: 74
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DUANE C ULMER
; STREET: P.O. BOX 1967
; CITY: MIDLAND
; STATE: MICHIGAN
; COUNTRY: USA
; ZIP: 48641-1967
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/479,285
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/040687
; FILING DATE: 31-MAR-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: ULMER, DUANE C
; REGISTRATION NUMBER: 34,941
; REFERENCE/DOCKET NUMBER: C-37,075C
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (517) 636-8104
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 134 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-479-285-4

Query Match 89.8%; Score 543; DB 3; Length 134;
Best Local Similarity 89.6%; Pred. No. 2.2e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQGLEWIGYFSPGNDDPKY 60
Db 20 QVQLQSDAELVKPGASVKISKASGYTFTDHAHWKQNPQGLEWIGYFSPGNDDPKY 79
QY 61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTRSLNMYWGQGTLTVSS 115
Db 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNMYWGQGTSTVSS 134

RESULT 20
US-08-479-285-29
; Sequence 29, Application US/08479285
; Patent No. 6207815
; GENERAL INFORMATION:
; APPLICANT: MEZES, PETER S
```

```
; APPLICANT: GOURLIE, BRIAN B
; APPLICANT: RIXON, MARK W
; APPLICANT: ANDERSON, WH KERR
; APPLICANT: KAPLAN, DONALD A
; APPLICANT: SCHLOM, JEFFREY
; TITLE OF INVENTION: A NOVEL FAMILY OF HIGH AFFINITY,
; MODIFIED ANTIBODIES FOR CANCER TREATMENT
; NUMBER OF SEQUENCES: 74
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DUANE C ULMER
; STREET: P.O. BOX 1967
; CITY: MIDLAND
; STATE: MICHIGAN
; COUNTRY: USA
; ZIP: 48641-1967
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/479,285
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/040687
; FILING DATE: 31-MAR-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: ULMER, DUANE C
; REGISTRATION NUMBER: 34,941
; REFERENCE/DOCKET NUMBER: C-37,075C
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (517) 636-8104
; INFORMATION FOR SEQ ID NO: 29:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 134 amino acids
; TYPE: amino acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-479-285-29

Query Match 89.8%; Score 543; DB 3; Length 134;
Best Local Similarity 89.6%; Pred. No. 2.2e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQGLEWIGYFSPGNDDPKY 60
Db 20 QVQLQSDAELVKPGASVKISKASGYTFTDHAHWKQNPQGLEWIGYFSPGNDDPKY 79
QY 61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTRSLNMYWGQGTLTVSS 115
Db 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSLNMYWGQGTSTVSS 134

RESULT 21
US-09-503-653A-4
; Sequence 4, Application US/09503653A
; Patent No. 6641999
; GENERAL INFORMATION:
; APPLICANT: Mezes, Peter S
; APPLICANT: Gourlie, Brian B
; APPLICANT: Rixon, Mark W
; APPLICANT: Anderson, WH Kerr
; APPLICANT: Kaplan, Donald A
; APPLICANT: Schlom, Jeffrey
; TITLE OF INVENTION: Probing Method for Identifying Antibodies
; SPECIFIC FOR SELECTED ANTIGENS
; FILE REFERENCE: 37075H-CIP1
; CURRENT APPLICATION NUMBER: US/09/503,653A
; CURRENT FILING DATE: 2000-02-14
; PRIOR APPLICATION NUMBER: US 08/040,687
; PRIOR FILING DATE: 1993-03-31
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;; PRIOR APPLICATION NUMBER: US 07/424,362  
;; PRIOR FILING DATE: 1989-10-19  
;; PRIOR APPLICATION NUMBER: US 07/261,942  
;; PRIOR FILING DATE: 1988-10-24  
;; PRIOR APPLICATION NUMBER: US 07/259,943  
;; PRIOR FILING DATE: 1988-10-19  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: MICROSOFT Word 97 SR-2  
;; SEQ ID NO 4  
;; LENGTH: 134  
;; TYPE: PRT  
;; ORGANISM: Mus musculus  
;; FEATURE:  
;; NAME/KEY: SIGNAL  
;; LOCATION: -19..-1  
;; NAME/KEY: CHAIN  
;; LOCATION: 1..115  
US-09-503-653A-4

Query Match 89.8%; Score 543; DB 4; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.2e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQGLRWIGYFSPGNDDFKY 60  
DB 20 QVQLQSDAELVKPGASVKISCKASGYTFDTHAIHWKQNPQGLRWIGYFSPGNDDFKY 79  
QY 61 NERFKGKATLTADTSASTAYVELSSRSEDYAVYFCTRSINMAYWGQGLTVTVSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRSINMAYWGQGLTVTVSS 134

RESULT 22  
US-09-503-653A-29  
;; Sequence 29, Application US/09503653A  
;; Patent No. 6641993  
;; GENERAL INFORMATION:  
;; APPLICANT: Mezes, Peter S  
;; APPLICANT: Gourlie, Brian B  
;; APPLICANT: Rixon, Mark W  
;; APPLICANT: Anderson, WH Kerr  
;; APPLICANT: Kaplan, Donald A  
;; APPLICANT: Schlom, Jeffrey  
;; TITLE OF INVENTION: Probing Method for Identifying Antibodies  
;; FILE OF INVENTION: Specific for Selected Antigens  
;; FILE REFERENCE: 37075H-CIP1  
;; CURRENT APPLICATION NUMBER: US/09/503,653A  
;; PRIOR FILING DATE: 2000-02-14  
;; PRIOR APPLICATION NUMBER: US 08/040,687  
;; PRIOR FILING DATE: 1993-03-31  
;; PRIOR APPLICATION NUMBER: US 07/424,362  
;; PRIOR FILING DATE: 1989-10-19  
;; PRIOR APPLICATION NUMBER: US 07/261,942  
;; PRIOR FILING DATE: 1988-10-24  
;; PRIOR APPLICATION NUMBER: US 07/259,943  
;; PRIOR FILING DATE: 1988-10-19  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: MICROSOFT Word 97 SR-2  
;; SEQ ID NO 29  
;; LENGTH: 134  
;; TYPE: PRT  
;; ORGANISM: Mus musculus  
US-09-503-653A-29

Query Match 89.8%; Score 543; DB 4; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.2e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQGLRWIGYFSPGNDDFKY 60  
DB 20 QVQLQSDAELVKPGASVKISCKASGYTFDTHAIHWKQNPQGLRWIGYFSPGNDDFKY 79  
QY 61 NERFKGKATLTADTSASTAYVELSSRSEDYAVYFCTRSINMAYWGQGLTVTVSS 115

DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRSINMAYWGQGLTVTVSS 134  
RESULT 23  
US-08-392-338A-19  
;; Sequence 19, Application US/08392338A  
;; Patent No. 5869620  
;; GENERAL INFORMATION:  
;; APPLICANT: Whitlow, Marc  
;; APPLICANT: Wood, James P.  
;; APPLICANT: Hardman, Karl  
;; APPLICANT: Bird, Robert  
;; APPLICANT: Filpula, David  
;; TITLE OF INVENTION: Multivalent Antigen-Binding Proteins  
;; NUMBER OF SEQUENCES: 23  
;; CORRESPONDENCE ADDRESS:  
;; ADDRESSEE: Sterne, Kessler, Goldstein & Fox P.L.L.C.  
;; STREET: 1100 New York Avenue, NW  
;; CITY: Washington  
;; STATE: D.C.  
;; COUNTRY: U.S.A.  
;; ZIP: 20005  
;; COMPUTER READABLE FORM:  
;; MEDIUM TYPE: Floppy disk  
;; COMPUTER: IBM PC compatible  
;; OPERATING SYSTEM: PC-DOS/MS-DOS  
;; SOFTWARE: PatentIn Release #1.0, Version #1.25  
;; CURRENT APPLICATION DATA:  
;; APPLICATION NUMBER: US/08/392,338A  
;; FILING DATE: 22-FEB-1995  
;; CLASSIFICATION: 435  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/989,846  
;; FILING DATE: 20-NOV-1992  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/796,936  
;; FILING DATE: 25-NOV-1991  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Goldstein, Jorge A.  
;; REGISTRATION NUMBER: 29,021  
;; REFERENCE/DOCKET NUMBER: 0977.0030007  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: (202) 371-2600  
;; TELEFAX: (202) 371-2540  
;; INFORMATION FOR SEQ ID NO: 19:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 483 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
US-08-392-338A-19

Query Match 89.8%; Score 543; DB 2; Length 483;  
Best Local Similarity 89.6%; Pred. No. 9.5e-47;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWKQNPQGLRWIGYFSPGNDDFKY 60  
DB 128 QVQLQSDAELVKPGASVKISCKASGYTFDTHAIHWKQNPQGLRWIGYFSPGNDDFKY 187  
QY 61 NERFKGKATLTADTSASTAYVELSSRSEDYAVYFCTRSINMAYWGQGLTVTVSS 115  
DB 188 NERFKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTRSINMAYWGQGLTVTVSS 242

RESULT 24  
US-09-166-750-19  
;; Sequence 19, Application US/09166750  
;; Patent No. 6025165  
;; GENERAL INFORMATION:  
;; APPLICANT: Whitlow, Marc  
;; APPLICANT: Wood, James P.

```
/
/ APPLICANT: Hardman, Karl
/ APPLICANT: Bird, Robert
/ APPLICANT: Filpula, David
/ APPLICANT: Rollence, Michelle
/ TITLE OF INVENTION: Methods for Producing Multivalent Antigen-Binding
/ PROTEINS
/ NUMBER OF SEQUENCES: 23
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Sterne, Kessler, Goldstein & Fox P.L.L.C.
/ STREET: 1100 New York Avenue, NW
/ CITY: Washington
/ STATE: D.C.
/ COUNTRY: U.S.A.
/ ZIP: 20005
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US 09/166,750
/ FILING DATE: Herewith
/ CLASSIFICATION:
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 08/392,338
/ FILING DATE: 22-FEB-1995
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 07/989,846
/ FILING DATE: 20-NOV-1992
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 07/796,936
/ FILING DATE: 22-FEB-1995
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Goldstein, Jorge A.
/ REGISTRATION NUMBER: 29,021
/ REFERENCE/DOCKET NUMBER: 0977.003000C
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202) 371-2600
/ TELEFAX: (202) 371-2540
/ INFORMATION FOR SEQ ID NO: 19:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 483 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ US-09-166-750-19

Query Match      89.8%; Score 543; DB 3; Length 483;
Best Local Similarity 89.6%; Pred. No. 9.5e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQORLEWIGYSPGNDDPKY 60
DB 128 QVQLQQSDAELVKPGASVKISKASGYTFTDHAHWKQNPQORLEWIGYSPGNDDPKY 187

QY 61 NERFKGKATLTADTASATAYVELSLRSEDVAVYFCTSLNNAYWGQGTSLTVSS 115
DB 188 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNAYWGQGTSLTVSS 242

RESULT 25
US-09-166-093-19
; Sequence 19, Application US/09166093
; Patent No. 6027725
; GENERAL INFORMATION:
; APPLICANT: Whitlow, Marc
; APPLICANT: Wood, James F.
; APPLICANT: Hardman, Karl
; APPLICANT: Bird, Robert
; APPLICANT: Filpula, David
; APPLICANT: Rollence, Michelle
; TITLE OF INVENTION: Multivalent Antigen-Binding Proteins
; NUMBER OF SEQUENCES: 23
```

```
/
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Sterne, Kessler, Goldstein & Fox P.L.L.C.
/ STREET: 1100 New York Avenue, NW
/ CITY: Washington
/ STATE: D.C.
/ COUNTRY: U.S.A.
/ ZIP: 20005
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US 09/166,093
/ FILING DATE: Herewith
/ CLASSIFICATION:
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 08/392,338
/ FILING DATE: 22-FEB-1995
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 07/989,846
/ FILING DATE: 20-NOV-1992
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 07/796,936
/ FILING DATE: 25-NOV-1991
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Goldstein, Jorge A.
/ REGISTRATION NUMBER: 29,021
/ REFERENCE/DOCKET NUMBER: 0977.003000B
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202) 371-2600
/ TELEFAX: (202) 371-2540
/ INFORMATION FOR SEQ ID NO: 19:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 483 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ US-09-166-093-19

Query Match      89.8%; Score 543; DB 3; Length 483;
Best Local Similarity 89.6%; Pred. No. 9.5e-47;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQORLEWIGYSPGNDDPKY 60
DB 128 QVQLQQSDAELVKPGASVKISKASGYTFTDHAHWKQNPQORLEWIGYSPGNDDPKY 187

QY 61 NERFKGKATLTADTASATAYVELSLRSEDVAVYFCTSLNNAYWGQGTSLTVSS 115
DB 188 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNAYWGQGTSLTVSS 242

Search completed: July 25, 2005, 08:12:50
Job time : 32.131 secs
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GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: July 25, 2005, 07:32:04 ; Search time 122.031 Seconds  
(without alignments)  
364.478 Million cell updates/sec

Title: US-10-058-069-7=COPY=20\_134  
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Sequence: 1 QVOLVQSGAEVVKPGASVKI.....CTRSLNMAVWGQTLVTSS 115

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2105692 segs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 100 summaries

Database : A Genesecp2004s:\*

1: Genesecp1980s:\*

2: Genesecp1990s:\*

3: Genesecp2000s:\*

4: Genesecp2001s:\*

5: Genesecp2002s:\*

6: Genesecp2003s:\*

7: Genesecp2003bs:\*

8: Genesecp2004s:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	605	100.0	115	3	AAY95244 Humanised
2	605	100.0	115	6	ADB17748 Humanised
3	605	100.0	115	7	ADG46868 Humanised
4	605	100.0	134	6	ADB17752 Humanised
5	605	100.0	134	7	ADG46873 Humanised
6	605	100.0	354	5	AAE27926 Human CH2
7	605	100.0	354	6	ABB82835 Antibody
8	543	89.8	115	2	AAY42261 Murine an
9	543	89.8	115	5	AABU78314 Murine CC
10	543	89.8	115	6	ABU09368 Heavy cha
11	543	89.8	115	6	ABU09368 Heavy cha
12	543	89.8	115	6	ABU10137 Murine TA
13	543	89.8	115	6	ABU10137 Murine TA
14	543	89.8	115	6	ABU17746 Native CC
15	543	89.8	115	6	ABU62751 Murine mo
16	543	89.8	115	6	ABU62760 Murine mo
17	543	89.8	115	7	AAE39057 Murine CC
18	543	89.8	115	7	ADG46866 Murine CC
19	543	89.8	115	8	ADP71403 Mouse CC4
20	543	89.8	134	2	AAAR04383 Colon Can
21	543	89.8	134	2	AAY50685 Human CC4
22	543	89.8	134	2	AAY57176 Amino aci
23	543	89.8	134	3	AAY57047 Amino aci
24	543	89.8	134	3	AAY90715 CC49 VH r
25	543	89.8	134	3	AAY90722 CC49 VH r

Aau02141	Mouse ant
Aau02134	Mouse PC4
Adk66841	Mouse CC4
Adk66816	Mouse CC4
Aab31421	Protein u
Aar88099	A protein
Aab07935	A divalen
Aay57254	Divalent
Aab27679	Bivalent
Aay80924	Bivalent
Abu61809	Divalent
Aar37649	Sequence
Aar56965	CC49 V-he
Aay97178	Monoclonal
Aay05760	Anti-TAG-
Aar97888	CC49/218
Aar49137	Sequence
Aar48638	Sequence
Aar56966	CC49 VL-L
Aar56967	CC49 VL-L
Aay97181	A multiva
Aay05762	CC49 sing
Aay05763	CC49 sing
Aay5864	4-4-20 VL
Aaw95438	Linked fu
Aaw88100	Single ch
Aab07936	A single-
Aay57255	4-4-20 VL
Aab27680	Bivalent
Aay80925	Single ch
Aay54834	Antibody
Aab61810	Antigen b
Aaw88095	Single-ch
Aay07931	A heterob
Aay57250	4-4-20 VL
Aab27675	Bivalent
Aay80920	Single ch
Aab61805	Antigen b
Aar97382	CC49 VL-P
Aaw81524	Single ch
Aay75157	CC49/218
Abg73145	CC49/218
Abg73865	CC49/218
Aar97380	CC49/212
Aar97381	PLAP CC49
Aay75158	CC49/218
Abg73146	CC49/218
Abg73866	CC49/218
Abj39018	CC49 sing
Aar38312	Sequence
Aar49139	Sequence
Aar49138	Sequence
Aar48636	Sequence
Aar48635	Sequence
Aar37650	Single-ch
Aar37645	Multivale
Adb17719	Heavy cha
Adg46839	Mouse CC4
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Aar48632	Sequence
Aar38318	Sequence
Aay50691	Human SCF
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Aay57183	Amino aci
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Aay57185	Amino aci
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99 533.5 88.2 284 7 ADG46862 Hum4VL-li  
100 530.5 87.7 284 2 AAR38321 Sequence

ALIGNMENTS

RESULT 1  
AA95244  
ID AA95244 standard; protein; 115 AA.  
XX  
AC AA95244;  
XX  
DT 12-SEP-2003 (revised)  
DT 29-AUG-2000 (first entry)  
XX  
XX Humanised antibody HuCC49 heavy chain variable region.  
XX  
XX Humanised antibody; monoclonal antibody; CC49; HuCC49; CDR;  
KW complementarity determining region; mouse; human; carcinoma;  
KW colon cancer; tumor associated glycoprotein-72; TAG-72; tumour marker;  
KW diagnosis; therapy.  
XX  
XX Mus musculus.  
OS Homo sapiens.  
OS Chimeric.  
XX  
FH Key Location/Qualifiers  
FT Region 31..35  
FT /note= "CDR1"  
FT Region 50..67  
FT /note= "CDR2"  
FT Region 99..104  
FT /note= "CDR3"  
XX  
XX WO200026394-A1.  
XX  
XX 11-MAY-2000.  
XX  
XX 29-OCT-1999; 99WO-US025552.  
XX  
XX 31-OCT-1998; 98US-0106534P.  
XX 02-NOV-1998; 98US-0106757P.  
XX (USHS ) US DEPT HEALTH & HUMAN SERVICES.  
XX  
XX Kashmiri SVS, Padlan EA, Schlom J;  
XX  
XX WPI; 2000-365637/31.  
XX  
XX Chimeric variants of CC49 monoclonal antibodies useful for detecting and  
PT treating cancers associated with the expression of the pancreaticoma tumor  
PT -associated antigen TAG-72.  
XX  
XX Disclosure; Fig 4; 76pp; English.  
XX  
XX The present sequence is that of the heavy chain variable region (VH) of  
CC HuCC49, a humanised monoclonal antibody (MAB) formed by grafting  
CC hypervariable regions from murine MAB CC49 into VL and VH frameworks of  
CC human MABs LEN and 21/28' CL, respectively, while retaining murine  
CC framework residues required for integrity of the antigen combining site  
CC structure. HuCC49 binds to the human pancreaticoma tumor associated  
CC glycoprotein-72 (TAG-72), which is found on the surface of certain human  
CC tumours. The invention is directed towards mouse-human chimeric variants  
CC of CC49 MABs with minimal murine content, to methods of making such  
CC variants, and their therapeutic application. The invention provides  
CC complementarity determining region (CDR) variants of HuCC49 in which  
CC fewer than all 6 CDRs of CC49 are present, and specificity determining  
CC region (SDR) variants of HuCC49 in which only SDRs of at least 1 CDR from  
CC CC49 are present. Particular variants of HuCC9 have either L-CDR1 and/or  
CC L-CDR2 from human MAB LEN. These variants have the same or 2-fold lower  
CC affinity constant than HuCC49. Other variants additionally have  
CC corresponding human residues at position 97 of L-CDR3, and positions 60,

CC 61, 62 and 64 of H-CDR2, or have residues 31, 32 and 34 of H-CDR1 from a  
CC non-human anti-TAG-12 antibody. The variants are used in claimed methods  
CC of treating cancer and for detecting cancer cells that express TAG-72.  
CC (Updated on 12-SEP-2003 to standardise OS field)  
XX  
XX Sequence 115 AA;  
XX  
XX Query Match 100.0%; Score 605; DB 3; Length 115;  
XX Best Local Similarity 100.0%; Pred. No. 5.8e-47;  
XX Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQORLEWIGYFSPGNDDFKY 60  
DB 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKQNPQORLEWIGYFSPGNDDFKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVFCTRSLNMYWGQGLTVTVSS 115  
DB 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVFCTRSLNMYWGQGLTVTVSS 115  
RESULT 2  
ADBI7748  
ID ADBI7748 standard; protein; 115 AA.  
XX  
XX ADBI7748;  
XX  
XX 20-NOV-2003 (first entry)  
XX  
XX Humanised CC49 heavy chain variable region fragment.  
XX  
XX anti-tumour-associated glycoprotein-72; TAG-72; antibody;  
KW complementarity determining region; CDR; cancer;  
KW malignant cell specific binding; hypersensitivity anti-mouse antibody;  
KW HAWA; accelerated whole body clearance; human; mouse.  
XX  
XX Mus musculus.  
OS Homo sapiens.  
XX  
XX US6495137-B1.  
XX  
XX 17-DEC-2002.  
XX  
XX 30-OCT-1997; 97US-00961309.  
XX  
XX 19-APR-1990; 90US-00510697.  
XX 20-OCT-1992; 92US-00964536.  
XX 16-JUN-1994; 94US-00261354.  
XX 31-OCT-1996; 96US-0030173P.  
XX  
XX (DOWC ) DOW CHEM CO.  
XX  
XX Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
XX Padlan EA;  
XX  
XX WPI; 2003-615251/58.  
XX  
XX New composite and humanized anti-tumor-associated glycoprotein-72  
PT monoclonal antibody useful for detecting or treating cancer.  
XX  
XX Claim 3; Fig 32B; 130pp; English.  
XX  
XX The invention relates to a humanised or composite anti-tumour-associated  
CC glycoprotein-72 (TAG-72) antibody or its fragment comprising a  
CC complementarity determining region (CDR)-grafted light chain having light  
CC chain CDRs of a murine anti-TAG-72 antibody grafted onto a human subgroup  
CC IV kappa light chain. The composition is suitable for the treatment and  
CC detection of cancer. The novel antibody has the ability to bind  
CC specifically to malignant cells and does not bind to normal cells. It  
CC greatly minimises or eliminates harmful hypersensitivity anti-mouse  
CC antibody (HAWA) responses. The relatively small size and human character  
CC of the composite Hum4V-L, V-H single chain antibodies accelerate whole  
CC body clearance, thus reducing the waiting period after injection before  
CC surgery is initiated. The present sequence represents the amino acid

CC sequence of the humanised CC49 heavy chain variable region fragment.  
XX Sequence 115 AA;  
Query Match 100.0%; Score 605; DB 6; Length 115;  
Best Local Similarity 100.0%; Pred. No. 5.8e-47; Indels 0; Gaps 0;  
Matches 115; Conservative 0; Mismatches 0;  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHWKQNPQORLEWIGYFSPGNDPKY 60  
DB 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHWKQNPQORLEWIGYFSPGNDPKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGLTVTVSS 115  
DB 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGLTVTVSS 115  
RESULT 3  
ADG46868  
ID ADG46868 standard; protein; 115 AA.  
XX AC ADG46868;  
DT 11-MAR-2004 (first entry)  
XX Humanised CC49 VH protein fragment with 21/28'CL VH framework regions.  
DE Anti-tumour-associated glycoprotein-72; anti-TAG-72 antibody;  
KW complementarity determining region; CDR-grafted light chain;  
KW subgroup IV kappa light chain; gene-therapy; immunology;  
XX genetic engineering; cancer; mouse; human; chimeric.  
OS Chimeric.  
OS Unidentified.  
OS Mus musculus.  
OS Homo sapiens.  
XX Key Location/Qualifiers  
FH Region 1..30  
FT /note= "Human LEN heavy chain variable region FR1"  
FT Region 31..35  
FT /note= "Murine CC49 heavy chain variable region CDRI"  
FT Region 36..49  
FT /note= "Human LEN heavy chain variable region FR2"  
FT Region 50..66  
FT /note= "Murine CC49 heavy chain variable region CDR2"  
FT Region 67..98  
FT /note= "Human LEN heavy chain variable region FR3"  
FT Region 99..104  
FT /note= "Murine CC49 heavy chain variable region CDR3"  
FT Region 105..115  
FT /note= "Human LEN heavy chain variable region FR4"  
XX US2003165498-A1.  
XX 04-SEP-2003.  
XX 25-SEP-2002; 2002US-00255478.  
XX 19-APR-1990; 90US-00510697.  
XX 20-OCT-1992; 92US-00964536.  
XX 16-JUN-1994; 94US-00261354.  
XX 31-OCT-1996; 96US-0030173P.  
XX 30-OCT-1997; 97US-00961309.  
XX (MEZE/) MEZES P S.  
XX (RICH/) RICHARD R A.  
XX (JOHN/) JOHNSON K S.  
XX (SCHL/) SCHLOM J.  
XX (KASH/) KASHMIRI S V S.  
XX (SHUL/) SHU L.  
XX (PADL/) PADLAN E A.

PI Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
PI Padlan EA;  
DR WPI; 2003-898033/82.  
XX New humanized or composite anti-TAG-72 monoclonal antibody with subgroup  
PT IV kappa light chain framework regions, useful in the fields of  
PT immunology and genetic engineering, particularly for detecting and/or  
PT treating cancer.  
XX  
XX Disclosure; SEQ ID NO 76; 133pp; English.  
XX  
CC The invention relates to a humanised or composite anti-tumour-associated  
CC glycoprotein-72 (anti-TAG-72) antibody or its fragment. The antibody  
CC comprises a complementarity determining region (CDR)-grafted light chain  
CC having non-human CDRs grafted to a human subgroup IV kappa light chain.  
CC The invention is useful in gene-therapy. The methods and compositions of  
CC the present invention are useful in the fields of immunology and genetic  
CC engineering, particularly for detecting and/or treating cancer. The  
CC present sequence is humanised CC49 VH protein fragment with 21/28'CL VH  
CC framework regions used in the exemplification of the invention.  
XX  
XX Sequence 115 AA;  
Query Match 100.0%; Score 605; DB 7; Length 115;  
Best Local Similarity 100.0%; Pred. No. 5.8e-47;  
Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHWKQNPQORLEWIGYFSPGNDPKY 60  
DB 1 QVQLVQSGAEVVKPGASVKISCKASGYTFTDHAHWKQNPQORLEWIGYFSPGNDPKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGLTVTVSS 115  
DB 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGLTVTVSS 115  
RESULT 4  
ADB17752  
ID ADB17752 standard; protein; 134 AA.  
XX AC ADB17752;  
XX 20-NOV-2003 (first entry)  
XX Humanised CC49 heavy chain variable region.  
XX anti-tumour-associated glycoprotein-72; TAG-72; antibody;  
KW complementarity determining region; CDR; cancer;  
KW malignant cell specific binding; hypersensitivity anti-mouse antibody;  
KW HAMA; accelerated whole body clearance; human; mouse.  
XX Mus musculus.  
XX Homo sapiens.  
XX US6495137-B1.  
XX 17-DEC-2002.  
XX 30-OCT-1997; 97US-00961309.  
XX 19-APR-1990; 90US-00510697.  
XX 20-OCT-1992; 92US-00964536.  
XX 16-JUN-1994; 94US-00261354.  
XX 31-OCT-1996; 96US-0030173P.  
XX (DOWC ) DOW CHEM CO.  
XX Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
PI Padlan EA;  
XX WPI; 2003-615251/58.  
DR N-PSDB; ADB17750.

XX New composite and humanized anti-tumor-associated glycoprotein-72  
PT monoclonal antibody useful for detecting or treating cancer.  
XX  
XX  
PS Disclosure; Col 113-114; 130pp; English.  
XX  
XX The invention relates to a humanised or composite anti-tumour-associated  
CC glycoprotein-72 (TAG-72) antibody or its fragment comprising a  
CC complementarity determining region (CDR)-grafted light chain having light  
CC chain CDRs of a murine anti-TAG-72 antibody grafted onto a human subgroup  
CC IV kappa light chain. The composition is suitable for the treatment and  
CC detection of cancer. The novel antibody has the ability to bind  
CC specifically to malignant cells and does not bind to normal cells. It  
CC greatly minimises or eliminates harmful hypersensitivity anti-mouse  
CC antibody (HAMA) responses. The relatively small size and human character  
CC of the composite Hum4V-L, V-H single chain antibodies accelerate whole  
CC body clearance, thus reducing the waiting period after injection before  
CC surgery is initiated. The present sequence represents the amino acid  
CC sequence of the humanised CC49 heavy chain variable region.  
XX  
XX Sequence 134 AA;  
SQ  
Query Match 100.0%; Score 605; DB 6; Length 134;  
Best Local Similarity 100.0%; Pred. No. 6.8e-47;  
Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDDPKY 60  
DB 20 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDDPKY 79  
QY 61 NERFKGKATLTADTTSASTAYVELSLRSEDVAVFCTRLNMYWGQGLTVTVSS 115  
DB 80 NERFKGKATLTADTTSASTAYVELSLRSEDVAVFCTRLNMYWGQGLTVTVSS 134  
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ADG46873  
ID ADG46873 standard; protein; 134 AA.  
XX  
XX ADG46873;  
XX  
XX 11-MAR-2004 (first entry)  
XX Humanised CC49 VH protein with 21/28'CL VH framework regions.  
XX  
XX Anti-tumour-associated glycoprotein-72; anti-TAG-72 antibody;  
KW complementarity determining region; CDR-grafted light chain;  
KW subgroup IV kappa light chain; gene-therapy; immunology;  
KW genetic engineering; cancer; mouse; human; fusion protein.  
XX  
XX Chimeric.  
OS Unidentified.  
OS Mus musculus.  
OS Homo sapiens.  
XX  
XX US2003165498-A1.  
XX  
XX PD 04-SEP-2003.  
XX  
XX 25-SEP-2002; 2002US-00255478.  
XX  
XX 19-APR-1990; 90US-00510697.  
PR 20-OCT-1992; 92US-00964536.  
PR 16-JUN-1994; 94US-00261354.  
PR 31-OCT-1996; 96US-0030173P.  
PR 30-OCT-1997; 97US-00961309.  
XX  
XX (MEZE/) MEZES P S.  
PA (RICH/) RICHARD R A.  
PA (JOHN/) JOHNSON K S.  
PA (SCHL/) SCHLUM J.  
PA (KASH/) KASHMIRI S V S.  
PA (SHUL/) SHU L.

PA (PADL/) PADLAN E A.  
XX  
XX Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
PI Padlan EA;  
XX  
XX WPI; 2003-898033/82.  
DR N-PSDB; ADG46870.  
XX  
XX New humanized or composite anti-TAG-72 monoclonal antibody with subgroup  
PT IV kappa light chain framework regions, useful in the fields of  
PT immunology and genetic engineering, particularly for detecting and/or  
PT treating cancer.  
XX  
XX Disclosure; SEQ ID NO 81; 133pp; English.  
XX  
XX The invention relates to a humanised or composite anti-tumour-associated  
CC glycoprotein-72 (anti-TAG-72) antibody or its fragment. The antibody  
CC comprises a complementarity determining region (CDR)-grafted light chain  
CC having non-human CDRs grafted to a human subgroup IV kappa light chain.  
CC The invention is useful in gene-therapy. The methods and compositions of  
CC the present invention are useful in the fields of immunology and genetic  
CC engineering, particularly for detecting and/or treating cancer. The  
CC present sequence is humanised CC49 VH protein with 21/28'CL VH framework  
CC regions used in the exemplification of the invention.  
XX  
XX Sequence 134 AA;  
SQ  
Query Match 100.0%; Score 605; DB 7; Length 134;  
Best Local Similarity 100.0%; Pred. No. 6.8e-47;  
Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDDPKY 60  
DB 20 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDDPKY 79  
QY 61 NERFKGKATLTADTTSASTAYVELSLRSEDVAVFCTRLNMYWGQGLTVTVSS 115  
DB 80 NERFKGKATLTADTTSASTAYVELSLRSEDVAVFCTRLNMYWGQGLTVTVSS 134  
RESULT 6  
AAE27926  
ID AAE27926 standard; protein; 354 AA.  
XX  
XX AAE27926;  
XX  
XX 27-DEC-2002 (first entry)  
XX Human CH2 domain deleted CC49 antibody heavy chain protein.  
XX  
XX Human; CC49 antibody; C2B8 antibody; tumour associated antigen; TAG-72;  
KW neoplasm; neoplastic disorder; haematologic neoplasm; colon cancer;  
KW non-Hodgkin's lymphoma; haematologic malignancy; tumour.  
XX  
XX Homo sapiens.  
XX  
XX WO200260955-A2.  
XX  
XX PD 08-AUG-2002.  
XX  
XX 29-JAN-2002; 2002WO-US002373.  
XX  
XX 29-JAN-2001; 2001US-0264318P.  
PR 16-NOV-2001; 2001US-0331481P.  
XX  
XX (IDEC-) IDEC PHARM CORP.  
XX  
XX Braslawsky GR, Hanna N, Chinn P;  
PI  
XX WPI; 2002-698547/75.  
DR N-PSDB; AAD45755.  
XX  
XX Novel domain deleted CC49 antibody reactive with tumor associated antigen

PT -72, or C2B8 antibody reactive with CD20, useful for treating  
PT myelosuppressed patient suffering from a neoplastic disorder.

PS Example 2; Fig 4A; 74pp; English.

XX The present invention relates to domain deleted CC49 or C2B8 antibodies.  
CC Domain deleted CC49 antibodies comprise a heavy chain human CC49 domain  
CC deleted sequence in which CH2 domain has been deleted and are reactive  
CC with tumour associated antigen (TAG)-72. The C2B8 antibodies are reactive  
CC with CD20 and comprise a heavy chain having a sequence of a derived  
CC domain deleted C2B8 construct where the CH2 domain has been deleted.  
CC Sequences of the invention are useful for imaging a neoplasm. They are  
CC also useful for treating myelosuppressed patients suffering from  
CC neoplastic disorder such as haematologic neoplasm, preferably non-  
CC Hodgkin's lymphoma. Antibodies of the invention are also used to treat  
CC neoplastic disorder, colon cancer and haematologic malignancy. They are  
CC useful for reducing tumour size, inhibiting tumour growth and/or  
CC prolonging the survival time of tumour-bearing animals and for treating  
CC tumours. The present sequence is human CH2 domain deleted CC49 antibody  
CC heavy chain protein. This sequence is used in the exemplification of the  
XX invention

SQ Sequence 354 AA;

Query Match 100.0%; Score 605; DB 5; Length 354;

Best Local Similarity 100.0%; Pred. No. 1.9e-46;

Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWVKQNPQRLWIGYFSPGNDPKY 60

DB 20 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWVKQNPQRLWIGYFSPGNDPKY 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGLTVTVSS 115

DB 80 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGLTVTVSS 134

RESULT 7

ABB82835

ID ABB82835 standard; protein; 354 AA.

XX ABB82835;

AC ABB82835;

XX 31-MAR-2003 (first entry)

DE Antibody huCC49 CH2 domain deleted heavy chain.

XX CC49; antibody; cytostatic; antiallergic; antianemic; antiaesthatic;  
KW vsotropic; immunomodulator; protozoacide; antidiabetic; nephrotropic;  
KW thyromimetic; hepatotropic; haemostatic; antileprotic; antibacterial;  
KW neuroprotective; antipsoriatic; antirheumatic; antiarthritic; antiulcer;  
KW dermatological; immunosuppressive; antiinflammatory.

OS Homo sapiens.

PN WO200296948-A2.

XX 05-DEC-2002.

PP 29-JAN-2002; 2002WO-US002374.

XX 29-JAN-2001; 2001US-0264318P.

PR 16-NOV-2001; 2001US-0331481P.

PR 21-DEC-2001; 2001US-0341858P.

XX (IDEC-) IDEC PHARM CORP.

XX Braelawsky GR, Harna N, Chinn P, Hariharan K;

XX WPI; 2003-140446/13.

DR N-PSDB; AB224019.

XX Novel dimeric antibody useful for treating immune disorder and neoplastic

PT disorder, has several non-covalently associated monomeric subunits.

PS Example 1; Fig 4A; 78pp; English.

XX The invention relates to a dimeric antibody (I) comprising several  
CC monomeric subunits, where the monomeric subunits are non-covalently  
CC associated. (I) is useful for treating a disorder, especially immune  
CC disorder, and neoplastic disorder such as relapsed Hodgkin's disease,  
CC resistant Hodgkin's disease high grade, low grade and intermediate grade  
CC non-Hodgkin's lymphomas, B cell chronic lymphocytic leukemia (B-CLL),  
CC lymphoplasmacytoid lymphoma (LPL), mantle cell lymphoma (MCL), follicular  
CC lymphoma (FL), diffuse large cell lymphoma (DLCL), Burkitt's lymphoma,  
CC AIDS-related lymphomas, monocytic B cell lymphoma, angioimmunoblastic  
CC lymphadenopathy, small lymphocytic, follicular, diffuse large cell,  
CC diffuse small cleaved cell, large cell immunoblastic lymphoblastoma,  
CC small, non-cleaved, Burkitt's and non-Burkitt's, follicular, mixed small  
CC cleaved and large cell lymphomas, in a mammal (see AB224017 for a  
CC detailed description of the various uses of (I)). The present sequence  
CC represents the antibody huCC49 CH2 domain deleted heavy chain

XX Sequence 354 AA;

Query Match 100.0%; Score 605; DB 6; Length 354;

Best Local Similarity 100.0%; Pred. No. 1.9e-46;

Matches 115; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWVKQNPQRLWIGYFSPGNDPKY 60

DB 20 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWVKQNPQRLWIGYFSPGNDPKY 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGLTVTVSS 115

DB 80 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGLTVTVSS 134

RESULT 8

AA42261

ID AA42261 standard; protein; 115 AA.

XX AA42261;

XX 01-DEC-1999 (first entry)

DE Murine anti-TAG-72 monoclonal antibody CC49 VH region.

XX Tumour-associated glycoprotein; TAG-72; carcinoma; cancer; tumour;  
KW antibody; therapy; immunogenic; humanise.

XX Mus sp.

XX WO9943816-A1.

PN 02-SEP-1999.

PD 25-FEB-1998; 98WO-US003679.

XX 25-FEB-1998; 98WO-US003679.

XX (DOWC ) DOW CHEM CO.

XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;

XX WPI; 1999-540593/45.

XX New humanized murine antibody specific for TAG-72 antigen, for treatment  
PT and diagnosis of cancer.

XX Example; Fig 1; 75pp; English.

XX This sequence represents murine monoclonal antibody CC49 heavy chain  
CC variable region (VH). CC49 binds TAG-72 (tumour-associated glycoprotein),  
CC a human pancreatic carcinoma antigen expressed by various human tumour cells.  
CC CC49 could be used as an anticancer agent; however, as it is from a

foreign species, it may cause a neutralising antibody response in the patient. In addition, its constant domains are murine and it may not exhibit human effector functions. To overcome these potential problems, humanised CC49 derivative antibodies were produced. These were produced by obtaining the CC49 heavy and light chain variable sequences, identifying the complementarity determining regions (CDRs) and grafting the CDR-encoding DNA sequences onto human antibody framework DNA sequences. Such humanised antibodies can be used in cancer therapy. The antibodies can be used to treat or prevent TAG-72-expressing cancers (e.g. of breast, ovary, prostate or colon) and to detect TAG-72-expressing cells, either in vitro or in vivo (particularly by tumour imaging to identify tumours and metastases before surgery), for diagnosis or prognosis. As the humanised antibodies are not significantly immunogenic, (i.e. they do not induce a human anti-murine antibody or allergic response, or non-specific cytotoxicity) they can be administered repeatedly. They retain specificity for TAG-72, and have improved clearance (allowing efficient targeting) and metabolic properties

Sequence 115 AA;  
Query Match 89.8%; Score 543; DB 2; Length 115;  
Best Local Similarity 89.6%; Pred. No. 2.3e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
Qy 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDPFKY 60  
Db 1 QVQLQQSDAELVKPGASVKISCKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDPFKY 60  
Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDVAVYFCTRLSLNMAWYGQGLTVTVSS 115  
Db 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRLSLNMAWYGQGLTVTVSS 115

RESULT 9  
AAU78314  
ID AAU78314 standard; protein; 115 AA.  
AC AAU78314;  
DT 05-JUN-2002 (first entry)  
DE Murine CC49 heavy chain variable region (VH).  
KW CC49; antibody; heavy chain variable region; humanised antibody;  
KW tumour-associated glycoprotein-72; TAG-72; pancreatic cancer;  
KW tumour imaging; VH.  
OS Mus musculus.  
XX US6348581-B1.  
XX 19-FEB-2002.  
XX 18-FEB-1998; 98US-00025203.  
XX 31-OCT-1996; 96US-0030173P.  
XX 30-OCT-1997; 97WO-US019641.  
XX (DOWC) DOW CHEM CO.  
XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;  
XX WPI; 2002-266545/31.

New humanized antibody which binds tumor-associated glycoprotein-72, useful for diagnosis of cancer e.g. for tumor imaging and for treatment of cancer.

Example 1; Fig 1; 40pp; English.

The invention describes a humanised antibody which specifically binds tumour-associated glycoprotein-72 (TAG-72), a human carcinoma antigen expressed by human tumour cells. The antibody comprises a N5WM-grafted

humanised heavy chain variable region (VH), and a REI-grafted humanised light chain variable region (VL), or its fragment which specifically binds TAG-72. A composition containing the antibody is useful for treatment of cancer, and for in vivo or in vitro detection of cancer e.g. for tumour imaging. This sequence represents the murine CC49 heavy chain variable region used in production of the TAG-72 binding humanised antibody of the invention

Sequence 115 AA;

Query Match 89.8%; Score 543; DB 5; Length 115;  
Best Local Similarity 89.6%; Pred. No. 2.3e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 QVQLVQSGAEVVKPGASVKISCKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDPFKY 60  
Db 1 QVQLQQSDAELVKPGASVKISCKASGYTFDTHAIHWVKQNPQORLEWIGYFSPGNDPFKY 60  
Qy 61 NERFKGKATLTADTSASTAYVELSLRSEDVAVYFCTRLSLNMAWYGQGLTVTVSS 115  
Db 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRLSLNMAWYGQGLTVTVSS 115

RESULT 10  
ABU09362  
ID ABU09362 standard; protein; 115 AA.

AC ABU09362;

DT 08-JUL-2003 (first entry)

DE Murine monoclonal antibody CC49 variable heavy chain (CC49MuVH).  
KW Murine; mouse; humanised monoclonal antibody; TAG-72; colon cancer;  
KW tumour-associated glycoprotein-72; immunodetection; tumour cell;  
KW surgical excision; disease status; cytostatic; CC49MuVH;  
KW CC49 variable heavy chain.

OS Mus sp.

XX US2003013856-A1.

XX 16-JAN-2003.

XX 31-OCT-2001; 2001US-00040997.

XX 31-OCT-1996; 96US-0030173P.

XX 30-OCT-1997; 97WO-US019641.

XX 18-FEB-1998; 98US-00025203.

XX (ANDE/) ANDERSON W H K.

XX (TEMP/) TEMPEST P R.

XX (CARR/) CARR F J.

XX (HARR/) HARRIS W J.

XX (ARMO/) ARMOUR K.

XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;

XX WPI; 2003-401607/38.

XX Novel humanized antibody derived from a murine antibody that specifically binds tumor-associated glycoprotein-72, useful for treating and detecting cancer.

XX Claim 2; Fig 1; 29pp; English.

The present invention relates to a novel humanised monoclonal antibody, and its fragments which specifically binds tumour-associated glycoprotein-72 (TAG-72), where the humanised monoclonal antibody is derived from a murine monoclonal antibody (e.g. CC49) that binds TAG-72. The humanised monoclonal antibody, and its fragments are useful for the treating and detection of TAG-72 cancers which express TAG-72 (e.g. colon cancer). The cancer is detected by the immunodetection of in vivo tumour cells, which



CC may be removed by surgical excision. The humanised monoclonal antibody of  
 CC the invention is useful as a immunodiagnostic agent both in vivo and in  
 CC vitro, and also for repeated monitoring of the disease status of a  
 CC patient. The present sequence represents murine monoclonal antibody CC49  
 CC variable heavy chain (CC49MuVH)

XX Sequence 115 AA;  
 SQ Query Match 89.8%; Score 543; DB 6; Length 115;  
 Best Local Similarity 89.6%; Pred. No. 2.3e-41;  
 Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
 QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKONPGQRLWIGVYFSPGNDFFKY 60  
 DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDHAHWKONPQEGLEWIGVYFSPGNDFFKY 60  
 QY 61 NERPKGKATLTADTSASTAYVELSLRSRSDTAVYFCTSLNNMAYWGQGLTVTVSS 115  
 DB 61 NERPKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTSLNNMAYWGQGLTVTVSS 115

RESULT 11  
 ABU09368  
 ID ABU09368 standard; protein; 115 AA.

XX AC ABU09368;  
 XX DT 08-JUL-2003 (first entry)  
 XX DE Heavy chain variable region of murine CC49.  
 XX KW Murine; mouse; humanised monoclonal antibody; TAG-72; colon cancer;  
 KW tumour-associated glycoprotein-72; immunodetection; tumour cell;  
 KW surgical excision; disease status; cytostatic; CC49;  
 KW heavy chain variable region.

XX OS Mus sp.

XX US2003013856-A1.  
 XX PD 16-JAN-2003.

XX PF 31-OCT-2001; 2001US-00040997.  
 XX PR 31-OCT-1996; 96US-0030173P.  
 XX PR 30-OCT-1997; 97WO-US019641.  
 XX PR 18-FEB-1998; 98US-00025203.

XX PA (ANDE/) ANDERSON W H K.  
 PA (TEMP/) TEMPEST P R.  
 PA (CARR/) CARR F J.  
 PA (HARR/) HARRIS W J.  
 PA (ARMO/) ARMOUR K.

XX PI Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;  
 XX WPI; 2003-401607/38.

XX PT Novel humanized antibody derived from a murine antibody that specifically  
 PT binds tumor-associated glycoprotein-72, useful for treating and detecting  
 PT cancer.

XX PS Claim 2; Fig 3; 29pp; English.

XX CC The present invention relates to a novel humanised monoclonal antibody,  
 CC and its fragments which specifically binds tumour-associated glycoprotein  
 CC -72 (TAG-72), where the humanised monoclonal antibody is derived from a  
 CC murine monoclonal antibody (e.g. CC49) that binds TAG-72. The humanised  
 CC monoclonal antibody, and its fragments are useful for the treating and  
 CC detection of TAG-72 cancers which express TAG-72 (e.g. colon cancer). The  
 CC cancer is detected by the immunodetection of in vivo tumour cells, which  
 CC may be removed by surgical excision. The humanised monoclonal antibody of  
 CC the invention is useful as a immunodiagnostic agent both in vivo and in

CC vitro, and also for repeated monitoring of the disease status of a  
 CC patient. The present sequence represents the heavy chain variable region  
 CC of murine CC49  
 XX Sequence 115 AA;  
 SQ Query Match 89.8%; Score 543; DB 6; Length 115;  
 Best Local Similarity 89.6%; Pred. No. 2.3e-41;  
 Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWKONPGQRLWIGVYFSPGNDFFKY 60  
 DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDHAHWKONPQEGLEWIGVYFSPGNDFFKY 60  
 QY 61 NERPKGKATLTADTSASTAYVELSLRSRSDTAVYFCTSLNNMAYWGQGLTVTVSS 115  
 DB 61 NERPKGKATLTADKSSSTAYVQLNSLTSDSAVYFCTSLNNMAYWGQGLTVTVSS 115

RESULT 12  
 ABU10143  
 ID ABU10143 standard; protein; 115 AA.

XX AC ABU10143;

XX DT 11-AUG-2003 (first entry)

XX DE Murine TAG-72 antibody CC49 heavy chain variable region.

XX KW Mouse; tumour-associated glycoprotein 72; TAG-72; antibody; CC49; cancer;  
 KW tumour; tumour imaging; serum clearance.

XX OS Mus sp.

XX FH Key Location/Qualifiers

XX FT Region 31.35  
 /label= CDR1

XX FT /note= "Complementarity determining region 1"

XX FT Region 50.66  
 /label= CDR2

XX FT /note= "Complementarity determining region 2"

XX FT Region 99.104  
 /label= CDR3

XX FT /note= "Complementarity determining region 3"

XX US2003013854-A1.

XX PD 16-JAN-2003.

XX PF 31-OCT-2001; 2001US-00999021.

XX PR 31-OCT-1996; 96US-0030173P.

XX PR 30-OCT-1997; 97WO-US019641.

XX PR 18-FEB-1998; 98US-00025203.

XX PA (ANDE/) ANDERSON W H K.

PA (TEMP/) TEMPEST P R.

PA (CARR/) CARR F J.

PA (HARR/) HARRIS W J.

PA (ARMO/) ARMOUR K.

XX PI Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;

XX WPI; 2003-438920/41.

XX PT Novel humanized monoclonal antibody which specifically binds tumor-  
 PT associated glycoprotein-72 useful for treating cancer and in vivo imaging  
 PT of tumors or cancer cells expressing the tumor-associated glycoprotein-  
 PT 72.

XX PS Disclosure; Fig 3; 29pp; English.

XX CC The invention relates to a humanised antibody (or its fragment) which

CC specifically binds tumour-associated glycoprotein 72 (TAG-72) (the  
CC antibody or its fragment is derived from a murine antibody which  
CC specifically binds TAG-72). The humanised antibody is useful for in vivo  
CC treatment of cancer, by intravenously administering a radionuclide-  
CC labelled antibody, detecting tumour cells using a radionuclide activity  
CC probe, and removing the detected tumour cells by surgical excision. The  
CC radionuclide is (125)I or (131)I. A composition containing the humanised  
CC antibody is useful for in vivo treatment of a mammal having a TAG-72  
CC expressing cancer. A composition containing the humanised antibody is  
CC useful for in vitro immunodetection of TAG-72 expressing cancer cells,  
CC where the antibody or its fragments of the composition are bound to a  
CC solid support and also for in vivo tumour imaging. The humanised  
CC antibodies have little or no reduced immunogenicity in humans over murine  
CC and chimeric antibodies and have improved serum clearance and metabolic  
CC properties. The antibodies can be used over prolonged time periods. The  
CC present sequence represents the amino acid sequence of the murine TAG-72  
CC antibody CC49 heavy chain variable region  
XX  
SQ Sequence 115 AA;  
Query Match 89.8%; Score 543; DB 6; Length 115;  
Best Local Similarity 89.6%; Pred. No. 2.3e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYFTDTHAIHWKQNPQGRLEWIGYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISKASGYFTDTHAIHWKQNPQGRLEWIGYFSPGNDDFKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGTSLTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNMYWGQGTSLTVSS 115  
RESULT 13  
ABU10137  
ID ABU10137 standard; protein; 115 AA.  
XX  
AC ABU10137;  
DT 11-AUG-2003 (first entry)  
XX  
DE Murine TAG-72 antibody CC49 heavy chain variable region.  
XX  
KW Mouse; tumour-associated glycoprotein 72; TAG-72; antibody; CC49; cancer;  
KW tumour; tumour imaging; serum clearance.  
XX  
OS Mus sp.  
FH Key Location/Qualifiers  
FT Region 31..35  
FT /label= CDR1  
FT /note= "Complementarity determining region 1"  
FT Region 50..66  
FT /label= CDR2  
FT /note= "Complementarity determining region 2"  
FT Region 99..104  
FT /label= CDR3  
FT /note= "Complementarity determining region 3"  
XX  
XX US2003013854-A1.  
XX  
XX 16-JAN-2003.  
XX  
XX 31-OCT-2001; 2001US-00999021.  
XX  
XX 31-OCT-1996; 96US-0030173P.  
XX 30-OCT-1997; 97WO-US019641.  
XX 18-FEB-1998; 98US-00025203.  
XX  
XX (ANDE/) ANDERSON W H K.  
XX (TEMP/) TEMPEST P R.  
XX (CARR/) CARR F J.  
XX (HARR/) HARRIS W J.

PA (ARMO/) ARMOUR K.  
XX  
XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;  
XX  
XX WPI; 2003-438920/41.  
XX  
XX Novel humanized monoclonal antibody which specifically binds tumor-  
XX associated glycoprotein-72 useful for treating cancer and in vivo imaging  
XX of tumors or cancer cells expressing the tumor-associated glycoprotein-  
XX 72.  
XX  
XX Disclosure; Fig 1; 29pp; English.  
XX  
XX The invention relates to a humanised antibody (or its fragment) which  
XX specifically binds tumour-associated glycoprotein 72 (TAG-72) (the  
XX antibody or its fragment is derived from a murine antibody which  
XX specifically binds TAG-72). The humanised antibody is useful for in vivo  
XX treatment of cancer, by intravenously administering a radionuclide-  
XX labelled antibody, detecting tumour cells using a radionuclide activity  
XX probe, and removing the detected tumour cells by surgical excision. The  
XX radionuclide is (125)I or (131)I. A composition containing the humanised  
XX antibody is useful for in vivo treatment of a mammal having a TAG-72  
XX expressing cancer. A composition containing the humanised antibody is  
XX useful for in vitro immunodetection of TAG-72 expressing cancer cells,  
XX where the antibody or its fragments of the composition are bound to a  
XX solid support and also for in vivo tumour imaging. The humanised  
XX antibodies have little or no reduced immunogenicity in humans over murine  
XX and chimeric antibodies and have improved serum clearance and metabolic  
XX properties. The antibodies can be used over prolonged time periods. The  
XX present sequence represents the amino acid sequence of the murine TAG-72  
XX antibody CC49 heavy chain variable region  
XX  
SQ Sequence 115 AA;  
Query Match 89.8%; Score 543; DB 6; Length 115;  
Best Local Similarity 89.6%; Pred. No. 2.3e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYFTDTHAIHWKQNPQGRLEWIGYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISKASGYFTDTHAIHWKQNPQGRLEWIGYFSPGNDDFKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNMYWGQGTSLTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNMYWGQGTSLTVSS 115  
RESULT 14  
ADB17746  
ID ADB17746 standard; protein; 115 AA.  
XX  
XX ADB17746;  
XX  
XX 20-NOV-2003 (first entry)  
XX  
XX Native CC49 heavy chain variable region.  
XX  
XX anti-tumour-associated glycoprotein-72; TAG-72; antibody;  
XX complementarity determining region; CDR; cancer;  
XX malignant cell specific binding; hypersensitivity anti-mouse antibody;  
XX HAMA; accelerated whole body clearance; mouse.  
XX  
XX Mus musculus.  
XX  
XX US6495137-B1.  
XX  
XX 17-DEC-2002.  
XX  
XX 30-OCT-1997; 97US-00961309.  
XX  
XX 19-APR-1990; 90US-00510697.  
XX 20-OCT-1992; 92US-00964536.  
XX 16-JUN-1994; 94US-00261354.

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PR 31-OCT-1996; 96US-0030173P.
XX (DOWC ) DOW CHEM CO.
PA
XX Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;
PI Padlan EA;
XX WPI; 2003-615251/58.
XX New composite and humanized anti-tumor-associated glycoprotein-72
PT monoclonal antibody useful for detecting or treating cancer.
XX Example 6; Fig 32B; 130pp; English.
XX The invention relates to a humanised or composite anti-tumour-associated
CC glycoprotein-72 (TAG-72) antibody or its fragment comprising a
CC complementarity determining region (CDR)-grafted light chain having light
CC chain CDRs of a murine anti-TAG-72 antibody grafted onto a human subgroup
CC IV kappa light chain. The composition is suitable for the treatment and
CC detection of cancer. The novel antibody has the ability to bind
CC specifically to malignant cells and does not bind to normal cells. It
CC greatly minimises or eliminates harmful hypersensitivity anti-mouse
CC antibody (HAMA) responses. The relatively small size and human character
CC of the composite Hum4V-L, V-H single chain antibodies accelerate whole
CC body clearance, thus reducing the waiting period after injection before
CC surgery is initiated. The present sequence represents the amino acid
CC sequence of the native CC49 heavy chain variable region.
XX Sequence 115 AA;
SQ
Query Match 89.8%; Score 543; DB 6; Length 115;
Best Local Similarity 89.6%; Pred. No. 2.3e-41;
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;
QY 1 QVQLVSGAEVVKPGASVKISKASGYTFTDTHAIHWKONPGORLEWIGVSPGNDDEKY 60
DB 1 QVQLQSDAEIVKPGASVKISKASGYTFTDTHAIHWKONPGORLEWIGVSPGNDDEKY 60
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYVYFCTRSINMAYWGQGLTVTVSS 115
DB 61 NERFKGKATLTADKSSSTAYVQLNLSLSDSAVYFCTRSINMAYWGQGLTVTVSS 115
RESULT 15
ABU62751
ID ABU62751 standard; protein; 115 AA.
XX
XX AC ABU62751;
XX
XX DT 08-SEP-2003 (first entry)
XX
XX DE Murine monoclonal antibody CC49 variable heavy chain #1.
XX
XX KW Mouse; monoclonal antibody; CC49; variable heavy region; cytostatic;
XX KW vaccine; humanised antibody; tumour-associated glycoprotein 72; TAG-72;
XX KW cancer; tumour.
XX
XX OS Mus musculus.
XX
XX PN US2003004318-A1.
XX
XX PD 02-JAN-2003.
XX
XX PF 31-OCT-2001; 2001US-00998817.
XX
XX PR 31-OCT-1996; 96US-0030173P.
XX PR 30-OCT-1997; 97WO-US019641.
XX PR 18-FEB-1998; 98US-00025203.
XX
XX PA (ANDE/) ANDERSON W H K.
XX PA (TEMP/) TEMPEST P R.
XX PA (CARR/) CARR F J.
XX PA (HARR/) HARRIS W J.
XX
XX PI Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;
XX WPI; 2003-491945/46.
PA
XX
XX PA (ARMO/) ARMOUR K.
XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;
XX WPI; 2003-491945/46.
XX
XX DR
```

XX New humanized anti-tumor-associated glycoprotein (TAG)-72 antibodies or  
PT antibody fragments, useful for treating cancers that express TAG-72, or  
PT for in vivo or in vitro detection of cancer, e.g. in vivo imaging of  
PT tumors or cancer cells.  
XX  
PS Claim 2; Fig 3; 41pp; English.  
XX  
CC The invention describes a humanised antibody or humanised antibody  
CC fragment which specifically binds tumour-associated glycoprotein (TAG)-  
CC 72. The humanised antibody or humanised antibody fragment is derived from  
CC a murine antibody that binds TAG-72. The humanised anti-tumour-associated  
CC glycoprotein (TAG)-72 antibodies or antibody fragments are useful for  
CC treating cancers that express TAG-72, or for the in vivo or in vitro  
CC detection of cancer, e.g. in vivo imaging of tumours or cancer cells that  
CC express TAG-72. This is the amino acid sequence of mouse monoclonal  
CC antibody CC49 variable heavy chain  
XX  
SQ Sequence 115 AA;  
Query Match 89.8%; Score 543; DB 6; Length 115;  
Best Local Similarity 89.6%; Pred. No. 2.3e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHIVKQNPQRLIEWIGYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDHAHIVKQNPQRLIEWIGYFSPGNDDFKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDNAVYFCTSLNMYWGQGLTVTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNMYWGQGLTVTVSS 115  
RESULT 17  
AAE39057  
ID AAE39057 standard; protein; 115 AA.  
XX  
AC AAE39057;  
XX  
DT 18-DEC-2003 (first entry)  
XX  
DE Murine CC49 VH protein.  
XX  
KW TAG-72; cancer; immunodetection; tumour imaging; colon carcinoma; murine;  
KW CC49 antibody; VH; heavy chain variable region.  
XX  
OS Mus musculus.  
XX  
PN US2002193574-A1.  
XX  
PD 19-DEC-2002.  
XX  
PF 31-OCT-2001; 2001US-00999040.  
XX  
PR 31-OCT-1996; 96US-0030173P.  
XX  
PR 30-OCT-1997; 97WO-US019641.  
XX  
PR 18-FEB-1998; 98US-00025203.  
XX  
PA (ANDE/) ANDERSON W H K.  
PA (TEMP/) TEMPEST P R.  
PA (CARR/) CARR F J.  
PA (HARR/) HARRIS W J.  
PA (ARMO/) ARMOUR K.  
XX  
PI Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;  
XX WPI; 2003-644619/61.  
XX  
PT Humanized antibody or fragment which specifically binds TAG-72 which is a  
PT pancreatic carcinoma antigen expressed by various human cancers, useful for  
PT treating cancer, particularly human colon carcinoma.  
XX  
PS Disclosure; Page 14; 0pp; English.

XX The present invention relates to a humanised antibody or its fragment  
CC which specifically binds TAG-72, where the humanised antibody or its  
CC fragment is derived from a murine antibody that binds TAG-72. The  
CC invention is useful in in vivo treatment of cancer, particularly human  
CC colon carcinoma. It is also useful in in vivo treatment of mammal having  
CC a TAG-72 expressing cancer. The invention is useful in in vitro or in  
CC vivo immunodetection (preferably in vivo tumour imaging) of TAG-72  
CC expressing cancer cells in a mammal. The present sequence is murine CC49  
CC VH (heavy chain variable region) protein. This sequence is used in the  
CC exemplification of the invention  
XX  
SQ Sequence 115 AA;  
Query Match 89.8%; Score 543; DB 7; Length 115;  
Best Local Similarity 89.6%; Pred. No. 2.3e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHIVKQNPQRLIEWIGYFSPGNDDFKY 60  
DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDHAHIVKQNPQRLIEWIGYFSPGNDDFKY 60  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDNAVYFCTSLNMYWGQGLTVTVSS 115  
DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNMYWGQGLTVTVSS 115  
RESULT 18  
ADG46866  
ID ADG46866 standard; protein; 115 AA.  
XX  
AC ADG46866;  
XX  
DT 11-MAR-2004 (first entry)  
XX  
DE Murine CC49 VH protein.  
XX  
KW Anti-tumour-associated glycoprotein-72; anti-TAG-72 antibody;  
KW complementarity determining region; CDR-grafted light chain;  
KW subgroup IV kappa light chain; gene-therapy; immunology;  
KW genetic engineering; cancer; mouse.  
XX  
OS Mus musculus.  
XX  
PN US2003165498-A1.  
XX  
PD 04-SEP-2003.  
XX  
PF 25-SEP-2002; 2002US-00255478.  
XX  
PR 19-APR-1990; 90US-00510697.  
XX  
PR 20-OCT-1992; 92US-00964536.  
XX  
PR 16-JUN-1994; 94US-00261354.  
XX  
PR 31-OCT-1996; 96US-0030173P.  
XX  
PR 30-OCT-1997; 97US-00961309.  
XX  
PA (MEZE/) MEZES P S.  
PA (RICH/) RICHARD R A.  
PA (JOHN/) JOHNSON K S.  
PA (SCHL/) SCHLOM J.  
PA (KASH/) KASHMIRI S V S.  
PA (SHUL/) SHU L.  
PA (PADL/) PADLAN E A.  
XX  
PI Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
XX Padlan EA;  
XX  
DR WPI; 2003-898033/82.  
XX  
PT New humanized or composite anti-TAG-72 monoclonal antibody with subgroup  
PT IV kappa light chain framework regions, useful in the fields of  
PT immunology and genetic engineering, particularly for detecting and/or  
PT treating cancer.

XX Disclosure; SEQ ID NO 74; 133pp; English.

XX The invention relates to a humanised or composite anti-tumour-associated

CC glycoprotein-72 (anti-TAG-72) antibody or its fragment. The antibody

CC comprises a complementarity determining region (CDR)-grafted light chain

CC having non-human CDRs grafted to a human subgroup IV kappa light chain.

CC The invention is useful in gene-therapy. The methods and compositions of

CC the present invention are useful in the fields of immunology and genetic

CC engineering, particularly for detecting and/or treating cancer. The

CC present sequence is murine CC49 VH protein used in the exemplification of

CC the invention.

XX

SQ Sequence 115 AA;

Query Match 89.8%; Score 543; DB 7; Length 115;

Best Local Similarity 89.6%; Pred. No. 2.3e-41;

Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHHVKQNPQGRLEWIGYFSPGNDDFKY 60

DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDHAHHVKQNPQGRLEWIGYFSPGNDDFKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNAYWQGTSLVTSS 115

DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDYAVYFCTSLNAYWQGTSLVTSS 115

RESULT 19

ADP71403

ID ADP71403 standard; protein; 115 AA.

XX

AC ADP71403;

DT 12-FEB-2004 (first entry)

DE Mouse CC49 heavy chain variable region protein.

XX

KW antibody; tumour; glycoprotein TAG-72; cancer; CC49;

KW heavy chain variable region; murine; mouse.

XX

OS Mus sp.

XX

PN US2002183497-A1.

XX

PD 05-DEC-2002.

XX

PF 31-OCT-2001; 2001US-00999025.

XX

PR 31-OCT-1996; 96US-0030173P.

PR 30-OCT-1997; 97WO-US019641.

PR 18-FEB-1998; 98US-00025203.

XX

PA (ANDE/) ANDERSON W H K.

PA (TEMP/) TEMPEST P R.

PA (CARR/) CARR F J.

PA (HARR/) HARRIS W J.

PA (ARMO/) ARMOUR K.

XX

PI Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;

XX

DR WPI; 2004-068735/07.

XX

PT Humanized antibody or antibody fragment which specifically binds tumor

PT associated glycoprotein TAG-72 is useful to detect TAG-72 expressing

PT cancer cells in vitro or in vivo for subsequent excision.

XX

PS Example 1; Fig 3; 29pp; English.

XX

CC The invention relates to a novel humanised antibody or antibody fragment

CC which specifically binds a tumour associated glycoprotein TAG-72 and is

CC derived from a murine antibody that binds TAG-72. The invention further

CC relates to: a nucleic acid sequence from which may be expressed the novel

CC antibody which comprises complementarity determining regions (CDRs)

CC obtained from the murine antibody Variable Heavy Framework Regions (FRs)

CC which have an amino acid sequence of the NEMM FR or the humanised CC49

CC FRs as shown in the specification and Variable Light FRs which have an

CC amino acid sequence of the REI FRs or the humanised CC49 FRs shown in the

CC specification; a vector comprising the nucleic acid of glycoprotein TAG-

CC 72; a composition for treating cancer comprising the novel antibody; in

CC vivo treatment of a mammal having a TAG-72-expressing cancer comprising

CC administering the composition; in vitro immunodetection of TAG-72-

CC expressing cancer cells comprising contacting the cells with the

CC composition where the antibody is associated with or linked to a

CC detectable label; treating cancer comprising: intravenously administering

CC the novel radionuclide-labelled antibody; detecting tumour cells using a

CC radionuclide probe; and removing the detected tumour cells by surgical

CC incision. The invention is useful to detect TAG-72 expressing cancer

CC cells in vitro or in vivo for subsequent excision. This sequence

CC represents a mouse CC49 heavy chain variable region protein of the

CC invention.

XX

SQ Sequence 115 AA;

Query Match 89.8%; Score 543; DB 8; Length 115;

Best Local Similarity 89.6%; Pred. No. 2.3e-41;

Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHHVKQNPQGRLEWIGYFSPGNDDFKY 60

DB 1 QVQLQSDAELVKPGASVKISKASGYTFTDHAHHVKQNPQGRLEWIGYFSPGNDDFKY 60

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNAYWQGTSLVTSS 115

DB 61 NERFKGKATLTADKSSSTAYVQLNSLTSEDYAVYFCTSLNAYWQGTSLVTSS 115

RESULT 20

AA04383

ID AA04383 standard; protein; 134 AA.

XX

AC AA04383;

DT 09-SEP-2004 (revised)

DT 25-MAR-2003 (revised)

DT 13-SEP-1990 (first entry)

XX

DE Colon Cancer monoclonal antibody CC49 heavy chain variable region.

XX

KW chimeric antibodies; TAG72; light chain variable region;

KW heavy chain variable region; ss; colon cancer.

XX

OS Synthetic.

XX

PH Key Location/Qualifiers

FT Peptide 1..19

FT Region /note= "leader peptide"

FT Region 50..54

FT Region /note= "hypervariable region 1"

FT Region 69..85

FT Region /note= "hypervariable region 2"

FT Region 104..109

FT Region /note= "hypervariable region 3"

XX

PN EP365997-A.

XX

PD 02-MAY-1990.

XX

PF 18-OCT-1989; 89EP-00119361.

XX

PR 19-OCT-1988; 88US-00259943.

XX

PA (DOWC ) DOW CHEM CO.

XX

PI Mezees P, Gourlie B, Rixon M;

XX

DR WPI; 1990-133521/18.  
DR N-PSDB; AAQ04259.  
XX Chimeric antibodies against tag 72 - and conjugate to provide imaging  
PT markers and therapeutic tools.  
XX  
PS Disclosure; Page ?; 2pp; English.  
XX  
CC The polypeptide forms part of a chimera. The other components are a light  
CC chain variable region and human-derived constant light and heavy chain  
CC regions. The variable regions have high affinity for TAG72. The constant  
CC regions reduce the side-effects when administered to human patients  
CC because they are of human origin. See also AAR04381-2 and AAR04384-8.  
CC (Updated on 25-MAR-2003 to correct PA field.)  
CC  
CC Revised record issued on 09-SEP-2004 : Correction to pages and features  
XX  
SQ Sequence 134 AA;

Query Match 89.8%; Score 543; DB 2; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.7e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWWKQNFQGLRWIGYFSPGNDDPKY 60  
DB 20 QVQLQQSDAELVKPGASVKISKASGYTFTDHAHWWKQNFQGLRWIGYFSPGNDDPKY 79  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDATVYFCTRLSLMAYWGQGLTVTVSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRLSLMAYWGQGLTVTVSS 134

RESULT 21  
AAVS0685  
ID AAVS0685 standard; protein; 134 AA.  
AC AAVS0685;  
DT 09-FEB-2000 (first entry)  
XX  
DE Human CC49 protein.  
XX  
KW Human; antibody; humanized; anti-tumor; sialylated glycoprotein antibody;  
KW TAG-72; cytostatic; cancer antigen; detection; carcinoma lesion;  
KW diagnostic; treatment.  
XX  
OS Homo sapiens.  
XX  
XX US5976531-A.  
XX  
PD 02-NOV-1999.  
XX  
PF 16-JUN-1994; 94US-00261354.  
XX  
PR 19-APR-1990; 90US-00510697.  
PR 20-OCT-1992; 92US-00964536.  
XX  
XX (DOWC ) DOW CHEM CO.  
XX  
XX Johnson KS, Mezes PS, Richard RA;  
XX  
DR WPI; 1999-632731/54.  
XX  
PT New humanized anti-TAG-72 antibodies, used for the detection, in vivo  
PT imaging and treatment of cancers.  
XX  
PS Disclosure; Fig 3A-E; 83pp; English.

XX This invention describes novel humanized anti-tumor associated sialylated  
CC glycoprotein antibodies (TAG-72) which have cytostatic activity. The  
CC antibodies have binding specificity for the cancer antigen TAG-72. They  
CC can be used for the in vivo detection of carcinoma lesions. They can also  
CC be used for in vitro diagnostics. They can also be modified with

CC therapeutic agents e.g. a radionuclide, drug, biological response  
CC modifier, toxin or another antibody for the treatment of cancers. The  
CC humanized anti-TAG-72 antibodies can reduce harmful anti-mouse antibody  
CC hypersensitivity reactions  
XX  
SQ Sequence 134 AA;

Query Match 89.8%; Score 543; DB 2; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.7e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHWWKQNFQGLRWIGYFSPGNDDPKY 60  
DB 20 QVQLQQSDAELVKPGASVKISKASGYTFTDHAHWWKQNFQGLRWIGYFSPGNDDPKY 79  
QY 61 NERFKGKATLTADTSASTAYVELSLRSEDATVYFCTRLSLMAYWGQGLTVTVSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRLSLMAYWGQGLTVTVSS 134

RESULT 22  
AAVS7176  
ID AAVS7176 standard; protein; 134 AA.  
AC AAVS7176;  
DT 29-FEB-2000 (first entry)  
XX  
DE Amino acid sequence of CC49 VH region.  
XX  
KW Tumor associated sialylated glycoprotein; TAG-72; cancer antigen;  
KW carcinoma lesion; diagnostic; cancer; antibody; human; CC49;  
KW anti-mouse antibody hypersensitivity reaction.  
XX  
OS Homo sapiens.  
XX  
XX US5976845-A.  
XX  
PD 02-NOV-1999.  
XX  
PF 07-JUN-1995; 95US-00487743.  
XX  
PR 19-APR-1990; 90US-00510697.  
PR 20-OCT-1992; 92US-00964536.  
PR 16-JUN-1994; 94US-00261354.  
XX  
XX (DOWC ) DOW CHEM CO.  
XX  
XX Johnson KS, Richard RA, Mezes PS;  
XX  
DR WPI; 1999-619651/53.  
DR N-PSDB; AAZ39424.  
XX  
PT Production of humanized anti-TAG-72 antibodies, used for the detection,  
XX in vivo imaging and treatment of cancers.  
PS Disclosure; Fig 3A-E; 85pp; English.

XX The invention relates to producing humanized anti-tumor associated  
CC sialylated glycoprotein (TAG-72) antibodies (anti-TAG). The antibodies  
CC have binding specificity for the cancer antigen TAG-72. These antibodies  
CC have variable regions with VL segments derived from human subgroup IV  
CC germ-line gene and a VH segment (encoded by the Vhalphatag germline gene)  
CC which is capable of combining with the VL to form a three dimensional  
CC structure having the ability to bind TAG-72. They can be used for the in  
CC vivo detection of carcinoma lesions. They can also be used for in vitro  
CC diagnostics. They can also be modified with therapeutic agents e.g. a  
CC radionuclide, drug, biological response modifier, toxin or another  
CC antibody for the treatment of cancers. The humanized anti-TAG-72  
CC antibodies can reduce harmful anti-mouse antibody hypersensitivity  
XX reactions

SQ Sequence 134 AA;

Query Match 89.8%; Score 543; DB 2; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.7e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQGRLEWIGYFSPGNDPKY 60  
DB 20 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKQNPQGRLEWIGYFSPGNDPKY 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNNMAYGQGTLTVTSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNMAYGQGTSTVTSS 134

RESULT 23  
AA57047  
ID AA57047 standard; protein; 134 AA.  
AC AA57047;  
XX  
XX 21-FEB-2000 (first entry)  
XX  
DE Amino acid sequence of antibody CC49 heavy chain variable region.  
XX  
DE VhalphatAG; anti-tumour associated sialylated glycoprotein antigen;  
KW TAG-72; variable region; heavy chain; carcinoma; detect; tumour;  
KW mouse-human chimeric antibody; therapeutic agent; intraoperative therapy.  
OS Mus sp.  
XX  
XX Key Location/Qualifiers  
FH Peptide 1..19  
FT Protein /note= "Putative signal peptide"  
FT Protein 20..134  
FT Protein /note= "Putative mature peptide"  
XX  
XX US5993813-A.  
XX  
XX 30-NOV-1999.  
XX  
XX 24-MAR-1997; 97US-00822028.  
XX  
XX 19-OCT-1988; 88US-00259943.  
PR 24-OCT-1988; 88US-00261942.  
PR 19-OCT-1989; 89US-00424362.  
PR 31-MAR-1993; 93US-00040687.  
XX  
XX (DOWC ) DOW CHEM CO.  
XX  
XX Mezes PS, Gourlie BB, Schlom J, Kaplan DA, Anderson WHK;  
PI Rixon MW;  
XX  
XX WPI; 2000-038240/03.  
DR N-PSDB; AA240702.  
XX  
XX New mouse-human chimeric antibody, useful for in vivo diagnosis of cancer.  
PT  
XX  
XX Example; Fig 3; 120pp; English.  
XX  
XX AA57047-257050 are heavy chain variable region amino acid sequences from monoclonal antibodies directed against TAG-72, designated colon cancer (CC) antibodies. These antibody regions are produced from the rearrangement of VhalphatAG (AA240701). The antibodies are used in the invention which relates to a new anti-tumour associated sialylated glycoprotein antigen (TAG)-72 mouse-human chimeric antibody. The variable region of the antibody has a heavy chain (VH) where VH is encoded by a DNA sequence homologous to the VhalphatAG germline gene. The invention includes a method for in vivo carcinoma targeting through the administration to an animal of an anti-TAG-72 mouse-human chimeric antibody produced by specific cell lines. The antibody or a fragment are conjugated to an imaging marker or therapeutic agent, in a pharmaceutically acceptable, nontoxic, sterile carrier. The chimeric

CC antibody binds to TAG-72 which is found on certain human tumour cells.  
CC The tissue regions containing the tumours can be detected via the markers  
CC and/or can be treated via the therapeutic agents. The method is useful  
CC for in vivo diagnosis and treatment of cancer by administering to an  
CC animal an effective amount of a composition for the in situ detection of  
CC carcinoma lesions. The method is useful for intraoperative therapy,  
CC consisting of locating the position of a tumour through the  
CC administration of the antibody, followed by excising the tumour  
XX  
XX Sequence 134 AA;  
XX  
Query Match 89.8%; Score 543; DB 3; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.7e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDTHAIHWKQNPQGRLEWIGYFSPGNDPKY 60  
DB 20 QVQLQSDAELVKPGASVKISKASGYTFTDTHAIHWKQNPQGRLEWIGYFSPGNDPKY 79

QY 61 NERFKGKATLTADTSASTAYVELSLRSEDYAVYFCTSLNNMAYGQGTLTVTSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTSLNNMAYGQGTSTVTSS 134

RESULT 24  
AA570715  
ID AA570715 standard; protein; 134 AA.  
XX  
XX AC AA570715;  
XX  
XX 14-AUG-2000 (first entry)  
XX  
XX CC49 VH region protein sequence SEQ ID NO:4.  
DE  
XX Chimeric antibody; VhalphatAG; TAG-72; human; mouse; diagnosis;  
KW tumour-associated sialylated glycoprotein antigen; cytostatic; carcinoma;  
KW cancer; detection; therapy.  
XX  
XX Homo sapiens.  
OS Mus sp.  
XX  
XX US6051225-A.  
XX  
XX 18-APR-2000.  
PD  
XX 31-MAR-1993; 93US-00040687.  
PF  
XX 19-OCT-1988; 88US-00259943.  
PR 24-OCT-1988; 88US-00261942.  
PR 19-OCT-1989; 89US-00424362.  
XX  
XX (DOWC ) DOW CHEM CO.  
XX  
XX Anderson WHK, Kaplan DA, Schlom J, Gourlie BB, Mezes PS;  
PI Rixon MW;  
XX  
XX WPI; 2000-349294/30.  
DR N-PSDB; AAA29683.  
XX  
XX Novel family of chimeric antibodies for treating cancer with high  
PT affinities to a high molecular weight tumor-associated sialylated  
PT glycoprotein antigen of human origin.  
XX  
XX Example; Fig 3; 122pp; English.  
XX  
XX The present invention describes an antibody (I) produced by one of the  
CC following cell lines: CH44-1 (ATCC HB9884); CH44-2 (ATCC HB9880); CH44-4  
CC (ATCC HB9877); CH88-1 (ATCC HB9882); CH88-2 (ATCC HB9881); CH88-3 (ATCC  
CC HB9876); CH88-4 (ATCC HB9874); CH84-1 (ATCC HB9883); CH84-2 (ATCC HB9879)  
CC ; CH84-3 (ATCC HB9878); and CH84-4 (ATCC HB9875), capable of binding to  
CC tumour-associated sialylated glycoprotein (TAG)-72 with an affinity at  
CC least 25% greater than B72.3. (I) can be used for treating and diagnosing  
CC cancer, and for the in situ detection of carcinoma lesions and for in

CC vivo therapy. AAA29682 to AAA29744, and AAY90714 to AAY90723, represent  
CC sequences used in the exemplification of the present invention  
XX  
SQ Sequence 134 AA;

Query Match 89.8%; Score 543; DB 3; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.7e-41;  
Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 60  
DB 20 QVQLQQSDAELVKPGASVKISKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 79  
QY 61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTRLNWAYWGQGTSLTVSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRLNWAYWGQGTSLTVSS 134

RESULT 25  
AAY90722  
ID AAY90722 standard; protein; 134 AA.  
XX  
AC AAY90722;  
DT 14-AUG-2000 (first entry)  
XX  
DE CC49 VH region CNBr amino acid sequence SEQ ID NO:29.  
XX  
KW Chimeric antibody; VhalphaTAG; TAG-72; human; mouse; diagnosis;  
KW tumour-associated sialylated glycoprotein antigen; cytostatic; carcinoma;  
KW cancer; detection; therapy.  
XX  
OS Homo sapiens.  
OS Mus sp.  
XX  
PN US6051225-A.  
XX  
PD 18-APR-2000.  
XX  
PF 31-MAR-1993; 93US-00040687.  
XX  
PR 19-OCT-1988; 88US-00259943.  
PR 24-OCT-1988; 88US-00261942.  
PR 19-OCT-1989; 89US-00424362.  
XX  
PA (DOWC ) DOW CHEM CO.  
XX  
PI Anderson WHK, Kaplan DA, Schlom J, Gourlie BB, Mezes PS;  
PI Rixon MW;  
XX  
DR WPI, 2000-349294/30.  
XX  
PT Novel family of chimeric antibodies for treating cancer with high  
PT affinities to a high molecular weight tumor-associated sialylated  
PT glycoprotein antigen of human origin.  
XX  
PS Example; Fig 18; 122pp; English.  
XX  
CC The present invention describes an antibody (I) produced by one of the  
CC following cell lines: CH44-1 (ATCC HB9884); CH44-2 (ATCC HB9880); CH44-4  
CC (ATCC HB9877); CH88-1 (ATCC HB9882); CH88-2 (ATCC HB9881); CH88-3 (ATCC  
CC HB9876); CH88-4 (ATCC HB9874); CH84-1 (ATCC HB9883); CH84-2 (ATCC HB9879)  
CC ; CH84-3 (ATCC HB9878); and CH84-4 (ATCC HB9875), capable of binding to  
CC tumour-associated sialylated glycoprotein (TAG)-72 with an affinity at  
CC least 25% greater than B72.3. (I) can be used for treating and diagnosing  
CC cancer, and for the in situ detection of carcinoma lesions and for in  
CC vivo therapy. AAA29682 to AAA29744, and AAY90714 to AAY90723, represent  
CC sequences used in the exemplification of the present invention  
XX  
SQ Sequence 134 AA;

Query Match 89.8%; Score 543; DB 3; Length 134;  
Best Local Similarity 89.6%; Pred. No. 2.7e-41;

Matches 103; Conservative 5; Mismatches 7; Indels 0; Gaps 0;  
QY 1 QVQLVQSGAEVVKPGASVKISKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 60  
DB 20 QVQLQQSDAELVKPGASVKISKASGYTFTDHAHHWVKQNPQORLEWIGYFSPGNDDPKY 79  
QY 61 NERFKGKATLTADTTSASTAYVELSLRSEDYAVYFCTRLNWAYWGQGTSLTVSS 115  
DB 80 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRLNWAYWGQGTSLTVSS 134

Search completed: July 25, 2005, 07:56:16  
Job time : 125.031 secs



Result No.	Score	Query			DB	ID	Description
		Match	Length	↑			
1	540	91.2	113	2	A49260	antitumor monoclon	
2	530.5	89.6	118	2	PT0356	Ig kappa chain V r	
3	528.5	89.3	138	2	S26040	Ig kappa chain pre	
4	527	89.0	114	1	KL0014	Ig kappa chain V-I	
5	527	89.0	145	2	PL001A	Ig kappa chain pre	
6	526	88.9	113	2	S30520	Ig kappa chain V r	
7	523	88.3	134	2	S49531	anti-Sm antibody V	
8	520	87.8	240	2	S06084	Ig kappa chain pre	
9	519	87.7	113	2	S34002	Ig kappa chain V r	
10	517	87.3	114	2	S44119	Ig kappa chain V-J	
11	516	87.2	114	2	S44116	Ig kappa chain V-J	
12	514	86.8	113	2	PL0263	Ig kappa chain V r	
13	513	86.7	120	2	S51147	Ig kappa chain V r	
14	513	86.7	134	1	K4HU17	antibody light cha	
15	512.5	86.6	112	2	S09370	Ig kappa chain pre	
16	512.5	86.6	133	1	K4HU1	Ig kappa chain V-J	
17	511	86.3	134	2	FC1214	Ig kappa chain pre	
18	508	85.8	113	2	S34003	Ig kappa chain pre	
19	506	85.5	129	2	S40347	Ig kappa chain V r	
20	502	84.8	113	2	S30523	Ig kappa chain - h	
21	502	84.8	124	2	S40364	Ig kappa chain V r	
22	498	84.1	112	2	F30538	Ig kappa chain - h	
23	496	83.8	132	2	S46373	Ig kappa chain V-J	
24	495.5	83.7	112	2	S41393	Ig kappa chain V r	
25	495	83.6	112	2	E30538	Ig kappa chain V r	
26	489	82.6	113	2	PL0264	Ig kappa chain V r	
27	487.5	82.3	112	2	PL0265	Ig kappa chain V r	
28	486	82.1	220	2	A31790	Ig kappa chain V r	
29	484.5	81.8	138	2	A53261	Ig kappa chain pre	



Db 1 DIVMTQSPNSLAVSLGERATINCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 60  
Qy 61 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKLELKR 114  
Db 61 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKLEIKR 114

RESULT 5  
PL0014  
Ig kappa chain precursor V region (F6-3) - mouse (fragment)  
C;Species: Mus musculus (house mouse)  
C;Date: 30-Jun-1992 #sequence\_revision 30-Jun-1992 #text\_change 21-Jan-2000  
C;Accession: FL0014  
R;Cheng, H.L.; Sood, A.K.; Ward, R.B.; Kieber-Emmons, T.; Kohler, H.  
Mol. Immunol. 25, 33-40, 1988  
A;Title: Structural basis of stimulatory anti-idiotypic antibodies.  
A;Reference number: FL0011; MUID:98142863; PMID:3125424  
A;Accession: FL0014  
A;Molecule type: mRNA  
A;Residues: 1-145 <CHE>  
A;Experimental source: cell line F6-3  
C;Comment: This protein is an anti-idiotypic antibody that induces an anti-phosphorylcholine  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotrimer; immunoglobulin  
F;1-20/Domain: signal sequence #status predicted <SIG>  
F;21-134/Product: Ig heavy chain V region (4C11) #status predicted <MAT>  
F;36-116/Domain: immunoglobulin homology <IMM>  
F;44-60/Region: complementarity-determining 1  
F;76-82/Region: complementarity-determining 2  
F;115-123/Region: complementarity-determining 3  
F;135-145/Domain: constant region (fragment) #status predicted <COR>

Query Match 89.0%; Score 527; DB 2; Length 145;  
Best Local Similarity 86.0%; Pred. No. 3.3e-40;  
Matches 98; Conservative 12; Mismatches 4; Indels 0; Gaps 0;

Qy 1 DIVMTQSPNSLAVSLGERVTLNCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 60  
Db 21 DIVMTQSPNSLAVSLGERVTLNCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 80

Qy 61 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKLELKR 114  
Db 81 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKLEMR 134

RESULT 6  
S30520  
Ig kappa chain V region - human  
C;Species: Homo sapiens (man)  
C;Date: 06-Jan-1995 #sequence\_revision 06-Jan-1995 #text\_change 21-Jan-2000  
C;Accession: S30520  
R;Marette, X.  
submitted to the EMBL Data Library, October 1992  
A;Reference number: S30520  
A;Accession: S30520  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-113 <MAR>  
A;Cross-references: EMBL:Z18325  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotrimer; immunoglobulin  
F;16-96/Domain: immunoglobulin homology <IMM>

Query Match 88.9%; Score 526; DB 2; Length 113;  
Best Local Similarity 86.7%; Pred. No. 3.2e-40;  
Matches 98; Conservative 7; Mismatches 8; Indels 0; Gaps 0;

Qy 1 DIVMTQSPNSLAVSLGERVTLNCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 60  
Db 1 DIVMTQSPNSLAVSLGERVTLNCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 60

Qy 61 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKLELKR 113

Db 61 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKVEIK 113

RESULT 7  
S49531  
anti-Sm antibody VL chain (V kappa 4/J kappa 3) - human  
C;Species: Homo sapiens (man)  
C;Date: 01-Feb-1995 #sequence\_revision 12-May-1995 #text\_change 21-Jan-2000  
C;Accession: S49531  
R;Mahmoudi, M.; Edwards, J.; Cairns, E.; Bell, D.  
submitted to the EMBL Data Library, October 1994  
A;Description: Molecular characterization of natural human anti-Sm autoantibodies.  
A;Reference number: S48797  
A;Accession: S49531  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-134 <MAH>  
A;Cross-references: EMBL:Z46347; NID:G560841; PIDN:CAA86466.1; PID:G560842  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
F;36-116/Domain: immunoglobulin homology <IMM>

Query Match 88.3%; Score 523; DB 2; Length 134;  
Best Local Similarity 86.0%; Pred. No. 7e-40;  
Matches 98; Conservative 7; Mismatches 9; Indels 0; Gaps 0;

Qy 1 DIVMTQSPNSLAVSLGERVTLNCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 60  
Db 21 DIVMTQSPNSLAVSLGERVTLNCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 80

Qy 61 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKLELKR 114  
Db 81 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKVDIKR 134

RESULT 8  
S06084  
Ig kappa chain precursor - rat  
C;Species: Rattus norvegicus (Norway rat)  
C;Date: 28-Feb-1990 #sequence\_revision 28-Feb-1990 #text\_change 21-Jan-2000  
C;Accession: S06084  
R;Crowe, J.S.; Smith, M.A.; Cooper, H.J.  
Nucleic Acids Res. 17, 7992, 1989  
A;Title: Nucleotide sequence of X3-Ag 1.2.3. rat myeloma immunoglobulin kappa chain cDNA  
A;Reference number: S06084; MUID:90016888; PMID:2508067  
A;Accession: S06084  
A;Molecule type: mRNA  
A;Residues: 1-240 <CRO>  
A;Cross-references: EMBL:X16129; NID:G56457; PIDN:CAA34256.1; PID:G56458  
C;Superfamily: immunoglobulin V region; immunoglobulin homology  
C;Keywords: heterotrimer; immunoglobulin  
F;1-20/Domain: signal sequence #status predicted <SIG>  
F;21-240/Product: Ig kappa chain #status predicted <MAT>  
F;153-222/Domain: immunoglobulin homology <IMM>

Query Match 87.8%; Score 520; DB 2; Length 240;  
Best Local Similarity 86.0%; Pred. No. 2.3e-39;  
Matches 98; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

Qy 1 DIVMTQSPNSLAVSLGERVTLNCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 60  
Db 21 DIVMTQSPNSLAVSLGERVTLNCKSSQSLVYSSNKNYLAWYQKQPKQLLIYWASTR 80

Qy 61 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKLELKR 114  
Db 81 ESGVDPDRFSGSGGTDTLTITSSVQAEADVAVYVYCOQYYSYPLTFGAGTKLELKR 134

RESULT 9  
S34002  
Ig kappa chain V region - human  
C;Species: Homo sapiens (man)  
C;Date: 02-Dec-1993 #sequence\_revision 10-Nov-1995 #text\_change 21-Jan-2000  
C;Accession: S34002; S30522



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Db      21  DIVMTQSPDLSAVSLGERATINCKSSQSVYYSNNKVIYLAWYQKFQGPPLLIYASTR 80
      61  ESGVPRDFSGSGGTDFTLTISVQAEDVAVYYCQOYSYPLTFGATGKLELKR 114
      81  ESGVPRDFSGSGGTDFTLTISLQAEDVAVYYCQOYDTP-TFGGGTKVEIKR 133

RESULT 17
PC1214
IG kappa chain precursor V region (mab H8) - mouse (fragment)
C/Species: Mus musculus (house mouse)
C/Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 21-Jan-2000
C/Accession: PC1214
R/Hong, H.J.; Kim, A.K.; Ryu, C.J.; Park, S.S.; Chung, H.K.; Kwon, K.S.; Kim, K.
Gene 121, 331-335, 1992
A/Title: Cloning and characterization of cDNAs coding for heavy and light chains
A/Reference number: PC1213; MUID:93077049; PMID:1446832

```



```

A;Description: Structural characterization of an (NZB X NZW)F1 mouse-derived IgM anti-DN
A;Reference number: S41393
A;Accession: S41393
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-112 <MAR>
A;Cross-references: EMBL:Z29536
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;16-96/Domain: immunoglobulin homology <IMM>

Query Match      83.7%; Score 495.5; DB 2; Length 112;
Best Local Similarity 84.1%; Pred. No. 1.7e-37;
Matches 95; Conservative 10; Mismatches 7; Indels 1; Gaps 1;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 1 DIVMSQSPSSLAVSVAGEKVTMSCKSSQSLLYSSNQKNYLAWYQKPGQSPKLLIYWASTR 60
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

Qy 61 ESGVDPFRFSGSGGTDFTLTITSSVQAEADVAVYYCQYYSYPLTFGAGTKLEL 112
    :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 61 DSGVDPFRFTGSGGTDFTLTITSSVQAEADVAVYYCKSYNL-RTFGGKTLEIK 112
    :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

RESULT 25
E30538
IG kappa chain V region (253.12D3) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 10-Feb-1989 #sequence_revision 10-Feb-1989 #text_change 21-Jan-2000
C;Accession: E30538
R;Clafilin, J.L.; Berry, J.
J. Immunol. 141, 4012-4019, 1988
A;Title: Genetics of the phosphocholine-specific antibody response to Streptococcus pneumoniae
A;Reference number: A30534; MUID:89035545; PMID:3141511
A;Accession: E30538
A;Status: preliminary; nucleic acid sequence not shown; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-112 <CIA>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;16-96/Domain: immunoglobulin homology <IMM>

Query Match      83.6%; Score 495; DB 2; Length 112;
Best Local Similarity 84.8%; Pred. No. 1.9e-37;
Matches 95; Conservative 9; Mismatches 8; Indels 0; Gaps 0;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
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Db 1 DIVMTSPSSLVSVAGEKVTMSCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASTR 60
    |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

Qy 61 ESGVDPFRFSGSGGTDFTLTITSSVQAEADVAVYYCQYYSYPLTFGAGTKLEL 112
    :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 61 ESGVDPFRFTGSGGTDFTLTITSSVQAEADVAVYYCNDHSYPTVTFGAGTKLEL 112
    :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

Search completed: July 25, 2005, 08:13:45
Job time : 25.393 secs

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GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: July 25, 2005, 08:00:16 ; Search time 105.039 Seconds  
(without alignments)

US-10-058-069-9\_copy\_21\_134

Title: 422-176-Million cell updates/sec  
Perfect score: 592  
Sequence: 1 DIVMSQSPDSLAVSLGERVT.....QQYYSYPLTFGAGTKLELKR 114

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1741741 seqs, 388992284 residues

Total number of hits satisfying chosen parameters: 1741741

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

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- 2: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep.\*
- 3: /cgn2\_6/ptodata/1/pubpaa/US06\_NEW\_PUB.pep.\*
- 4: /cgn2\_6/ptodata/1/pubpaa/US06\_PUBCOMB.pep.\*
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- 6: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep.\*
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- 21: /cgn2\_6/ptodata/1/pubpaa/US60\_NEW\_PUB.pep.\*
- 22: /cgn2\_6/ptodata/1/pubpaa/US60\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Length	ID	Description
1	587	99.2	113 14	US-10-255-478-73
2	541	91.4	134 14	US-10-255-478-58
3	540	91.2	113 9	US-09-999-025-7
4	540	91.2	113 9	US-09-999-025-13
5	540	91.2	113 9	US-09-999-040-7
6	540	91.2	113 9	US-09-999-040-13
7	540	91.2	113 10	US-09-998-817-7
8	540	91.2	113 10	US-09-998-817-13
9	540	91.2	113 10	US-09-999-021-7
10	540	91.2	113 10	US-09-999-021-13
11	540	91.2	113 14	US-10-040-997-7
				Sequence 73, Appl
				Sequence 58, Appl
				Sequence 7, Appl
				Sequence 7, Appl
				Sequence 13, Appl
				Sequence 13, Appl
				Sequence 13, Appl
				Sequence 13, Appl
				Sequence 7, Appl
				Sequence 13, Appl

85 528 89.2 135 14 US-10-171-452A-1 Sequence 1, Appli  
86 528 89.2 135 15 US-10-353-708-1 Sequence 1, Appli  
87 528 89.2 135 16 US-10-731-984-35 Sequence 35, Appli  
88 528 89.2 179 17 US-10-644-277-140 Sequence 140, Appl  
89 527 89.0 113 9 US-09-274-163E-16 Sequence 16, Appli  
90 527 89.0 114 9 US-09-274-163E-4 Sequence 4, Appli  
91 526 88.9 264 15 US-10-264-049-4274 Sequence 4274, Ap  
92 525.5 88.8 130 13 US-10-146-305-7 Sequence 7, Appli  
93 525 88.7 113 10 US-09-995-529-6 Sequence 6, Appli  
94 525 88.7 113 11 US-09-995-529-6 Sequence 6, Appli  
95 524 88.5 122 14 US-10-010-729-51 Sequence 51, Appli  
96 524 88.5 240 9 US-09-799-514-8 Sequence 8, Appli  
97 523 88.3 114 9 US-09-749-831-16 Sequence 16, Appli  
98 523 88.3 114 17 US-10-483-994-8 Sequence 8, Appli  
99 523 88.3 114 17 US-10-483-994-8 Sequence 8, Appli  
100 523 88.3 114 17 US-10-706-689-15 Sequence 15, Appli

ALIGNMENTS

RESULT 1  
US-10-255-478-73  
; Sequence 73, Application US/10255478  
; Publication No. US20030165498A1  
; GENERAL INFORMATION:  
; APPLICANT: Mezes, Peter S.  
; APPLICANT: Richard, Ruth A.  
; APPLICANT: Johnson, Kimberly S.  
; APPLICANT: Schlom, Jeffrey  
; APPLICANT: Kashmiri, Syed V.S.  
; APPLICANT: Shu, Liming  
; APPLICANT: Padlan, Eduardo A.  
; TITLE OF INVENTION: Composite Antibodies of Humanized Human Subgroup IV Light Chain  
; FILE REFERENCE: 37777E  
; CURRENT APPLICATION NUMBER: US/10/255,478  
; CURRENT FILING DATE: 2002-09-25  
; PRIOR FILING DATE: 1997-10-30  
; PRIOR APPLICATION NUMBER: US 60/030,173  
; PRIOR FILING DATE: 1996-10-31  
; PRIOR APPLICATION NUMBER: US 08/261,354  
; PRIOR FILING DATE: 1994-06-16  
; PRIOR APPLICATION NUMBER: US 07/964,536  
; PRIOR FILING DATE: 1992-10-20  
; PRIOR APPLICATION NUMBER: US 07/510,697  
; PRIOR FILING DATE: 1990-07-17  
; NUMBER OF SEQ ID NOS: 78  
; SOFTWARE: Microsoft Word 97 SR-2  
; SEQ ID NO 73  
; LENGTH: 113  
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; ORGANISM: Artificial Sequence  
; FEATURE:  
; NAME/KEY: Hucc49 VL  
; LOCATION: 1..113  
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; FEATURE:  
; NAME/KEY: LEN FR1  
; LOCATION: 1..23  
; OTHER INFORMATION: Human LEN light chain variable region FR1  
; FEATURE:  
; NAME/KEY: CC49 VL CDR1  
; LOCATION: 24..40  
; OTHER INFORMATION: Murine CC49 light chain variable region CDR1  
; FEATURE:  
; NAME/KEY: LEN FR2  
; LOCATION: 41..55  
; OTHER INFORMATION: Human LEN light chain variable region FR2  
; FEATURE:  
; NAME/KEY: CC49 VL CDR2  
; LOCATION: 56..62

; OTHER INFORMATION: Murine CC49 light chain variable region CDR2  
; FEATURE:  
; NAME/KEY: LEN FR3  
; LOCATION: 63..94  
; OTHER INFORMATION: Human LEN light chain variable region FR3  
; FEATURE:  
; NAME/KEY: CC49 VL CDR3  
; LOCATION: 95..103  
; OTHER INFORMATION: Murine CC49 light chain variable region CDR3  
; FEATURE:  
; NAME/KEY: LEN FR4  
; LOCATION: 104..113  
; OTHER INFORMATION: Human LEN light chain variable region FR4  
US-10-255-478-73  
Query Match 99.2%; Score 587; DB 14; Length 113;  
Best Local Similarity 100.0%; Pred. No. 1.5e-45;  
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60  
Db 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60  
QY 61 ESGVDPDRFSGSGGTDTLTITSSVQAEDVAVYCCQYYSYPLTFTGAGTKLELK 113  
Db 61 ESGVDPDRFSGSGGTDTLTITSSVQAEDVAVYCCQYYSYPLTFTGAGTKLELK 113  
RESULT 2  
US-10-255-478-58  
; Sequence 58, Application US/10255478  
; Publication No. US20030165498A1  
; GENERAL INFORMATION:  
; APPLICANT: Mezes, Peter S.  
; APPLICANT: Richard, Ruth A.  
; APPLICANT: Johnson, Kimberly S.  
; APPLICANT: Schlom, Jeffrey  
; APPLICANT: Kashmiri, Syed V.S.  
; APPLICANT: Shu, Liming  
; APPLICANT: Padlan, Eduardo A.  
; TITLE OF INVENTION: Composite Antibodies of Humanized Human Subgroup IV Light Chain  
; FILE REFERENCE: 37777E  
; CURRENT APPLICATION NUMBER: US/10/255,478  
; CURRENT FILING DATE: 2002-09-25  
; PRIOR FILING DATE: 1997-10-30  
; PRIOR APPLICATION NUMBER: US 60/030,173  
; PRIOR FILING DATE: 1996-10-31  
; PRIOR APPLICATION NUMBER: US 08/261,354  
; PRIOR FILING DATE: 1994-06-16  
; PRIOR APPLICATION NUMBER: US 07/964,536  
; PRIOR FILING DATE: 1992-10-20  
; PRIOR APPLICATION NUMBER: US 07/510,697  
; PRIOR FILING DATE: 1990-07-17  
; NUMBER OF SEQ ID NOS: 78  
; SOFTWARE: Microsoft Word 97 SR-2  
; SEQ ID NO 58  
; LENGTH: 134  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
; FEATURE:  
; NAME/KEY: Hum4 VL  
; LOCATION: 1..134  
US-10-255-478-58  
Query Match 91.4%; Score 541; DB 14; Length 134;  
Best Local Similarity 88.6%; Pred. No. 2.6e-41;  
Matches 101; Conservative 6; Mismatches 7; Indels 0; Gaps 0;  
QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60  
Db 21 DIVMTQSPDSLAVSLGERATINCKSSQSLYSSNNKNYLAWYQQKPGQPPKLLIYWASTR 80

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QY 61 ESGVPRFSGSGGTDFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELKR 114
      |||
Db 81 ESGVPRFSGSGGTDFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKVVKR 134
      |||

RESULT 3
US-09-999-025-7
; Sequence 7, Application US/09999025
; Publication No. US20020183497A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,025
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 7
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VK
; LOCATION: 1..113
US-09-999-025-7

Query Match 91.2%; Score 540; DB 9; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
      |||
Db 1 DIVMSQSPSLPVSGEKVTLCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
      |||

QY 61 ESGVPRFSGSGGTDFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
      |||
Db 61 ESGVPRFSGSGGTDFTLTISVQKTEDLAVYCCQYYSYPLTFGAGTKLVK 113
      |||

RESULT 4
US-09-999-025-13
; Sequence 13, Application US/09999025
; Publication No. US20020183497A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,025
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VK
; LOCATION: 1..113
US-09-999-025-13

Query Match 91.2%; Score 540; DB 9; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
      |||
Db 1 DIVMSQSPSLPVSGEKVTLCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
      |||

QY 61 ESGVPRFSGSGGTDFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
      |||
Db 61 ESGVPRFSGSGGTDFTLTISVQKTEDLAVYCCQYYSYPLTFGAGTKLVK 113
      |||

RESULT 5
US-09-999-040-7
; Sequence 7, Application US/09999040
; Publication No. US20020193574A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 7
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VK
; LOCATION: 1..113
US-09-999-040-7

Query Match 91.2%; Score 540; DB 9; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
      |||
Db 1 DIVMSQSPSLPVSGEKVTLCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
      |||

QY 61 ESGVPRFSGSGGTDFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
      |||
Db 61 ESGVPRFSGSGGTDFTLTISVQKTEDLAVYCCQYYSYPLTFGAGTKLVK 113
      |||

RESULT 6
US-09-999-040-13
; Sequence 13, Application US/09999040
; Publication No. US20020193574A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
```

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; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,040
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 09/999,040
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
; US-09-999-040-13

Query Match          91.2%; Score 540; DB 9; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60
Db 1 DIVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60
QY 61 ESGVPDRFSGSGGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFTGAGTKLELK 113
Db 61 ESGVPDRFTGSGGTDTFTLTSSVKTEDLAVYCCQYYSYPLTFTGAGTKLVK 113

RESULT 7
US-09-998-817-7
; Sequence 7, Application US/09998817
; Publication No. US20030004318A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/998,817
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US/09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
; US-09-998-817-7

Query Match          91.2%; Score 540; DB 10; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60
Db 1 DIVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60
QY 61 ESGVPDRFSGSGGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFTGAGTKLELK 113
Db 61 ESGVPDRFTGSGGTDTFTLTSSVKTEDLAVYCCQYYSYPLTFTGAGTKLVK 113

RESULT 9
US-09-999-021-7
; Sequence 9, Application US/09999021
; Publication No. US20030013854A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,021
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
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Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60
Db 1 DIVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60
QY 61 ESGVPDRFSGSGGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFTGAGTKLELK 113
Db 61 ESGVPDRFTGSGGTDTFTLTSSVKTEDLAVYCCQYYSYPLTFTGAGTKLVK 113

RESULT 8
US-09-998-817-13
; Sequence 13, Application US/09998817
; Publication No. US20030004318A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/998,817
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US/09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
; US-09-998-817-13

Query Match          91.2%; Score 540; DB 10; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60
Db 1 DIVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60
QY 61 ESGVPDRFSGSGGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFTGAGTKLELK 113
Db 61 ESGVPDRFTGSGGTDTFTLTSSVKTEDLAVYCCQYYSYPLTFTGAGTKLVK 113

RESULT 9
US-09-999-021-7
; Sequence 7, Application US/09999021
; Publication No. US20030013854A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Cart, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,021
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
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; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 7
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VK
; LOCATION: 1..113
US-09-999-021-7

Query Match          91.2%; Score 540; DB 10; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
DB 1 DIVMSQSPSSLVPSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
QY 61 ESGVDRFSGSGGTDTFTLTSSVOAEDVAVYVYCOQYYSYPLTFGAGTKLELK 113
DB 61 ESGVDRFTGSGGTDTFTLTSSVKTEDLAVYVYCOQYYSYPLTFGAGTKLVK 113

RESULT 10
US-09-999-021-13
; Sequence 13, Application US/09999021
; Publication No. US20030013854A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,021
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
US-09-999-021-13

Query Match          91.2%; Score 540; DB 10; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
DB 1 DIVMSQSPSSLVPSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
QY 61 ESGVDRFSGSGGTDTFTLTSSVOAEDVAVYVYCOQYYSYPLTFGAGTKLELK 113
DB 61 ESGVDRFTGSGGTDTFTLTSSVKTEDLAVYVYCOQYYSYPLTFGAGTKLVK 113

RESULT 11
US-09-999-021-13
; Sequence 13, Application US/09999021
; Publication No. US20030013854A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,021
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
US-09-999-021-13

Query Match          91.2%; Score 540; DB 10; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
DB 1 DIVMSQSPSSLVPSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
QY 61 ESGVDRFSGSGGTDTFTLTSSVOAEDVAVYVYCOQYYSYPLTFGAGTKLELK 113
DB 61 ESGVDRFTGSGGTDTFTLTSSVKTEDLAVYVYCOQYYSYPLTFGAGTKLVK 113

RESULT 12
US-10-040-997-13
; Sequence 13, Application US/10040997
; Publication No. US20030013856A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
US-10-040-997-13

Query Match          91.2%; Score 540; DB 14; Length 113;
Best Local Similarity 90.3%; Pred. No. 2.7e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
DB 1 DIVMSQSPSSLVPSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
QY 61 ESGVDRFSGSGGTDTFTLTSSVOAEDVAVYVYCOQYYSYPLTFGAGTKLELK 113
DB 61 ESGVDRFTGSGGTDTFTLTSSVKTEDLAVYVYCOQYYSYPLTFGAGTKLVK 113
```



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Publication No. US20030212027A1
GENERAL INFORMATION:
APPLICANT: Barbera-Guillem, Emilio
APPLICANT: Nelson, M. Bud
TITLE OF INVENTION: Vaccine Formulations and Methods for Immunizing an
Individual Against Shed Antigen-Specific B Cells
FILE REFERENCE: 26983-46-1
CURRENT APPLICATION NUMBER: US/10/336,210
PRIORITY FILING DATE: 2003-01-03
PRIORITY FILING DATE: 60/139,521
PRIORITY FILING DATE: 1999-06-16
PRIORITY FILING DATE: 09/594,985
PRIORITY FILING DATE: 2000-06-15
NUMBER OF SEQ ID NOS: 21
SOFTWARE: Patent in version 3.1
SEQ ID NO 6
LENGTH: 271
TYPE: PRT
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: synthesized
US-10-336-210-6

Query Match          91.2%; Score 540; DB 15; Length 271;
Best Local Similarity 90.3%; Pred. No. 6.8e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

Qy 1 DIVMSQSPDSLAVSLGSRVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
Db 159 DIVMSQSPSSLPVSVGKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 218

Qy 61 ESGVPRFSGSGSDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113
Db 219 ESGVPRFSGSGSDTFTLTSSVKTDLAVYCCQYYSYPLTFGAGTKLVK 271

RESULT 17
US-10-336-210-7
Sequence 7, Application US/10336210
Publication No. US20030212027A1
GENERAL INFORMATION:
APPLICANT: Barbera-Guillem, Emilio
APPLICANT: Nelson, M. Bud
TITLE OF INVENTION: Vaccine Formulations and Methods for Immunizing an
Individual Against Shed Antigen-Specific B Cells
FILE REFERENCE: 26983-46-1
CURRENT APPLICATION NUMBER: US/10/336,210
PRIORITY FILING DATE: 2003-01-03
PRIORITY FILING DATE: 60/139,521
PRIORITY FILING DATE: 1999-06-16
PRIORITY FILING DATE: 09/594,985
PRIORITY FILING DATE: 2000-06-15
NUMBER OF SEQ ID NOS: 21
SOFTWARE: Patent in version 3.1
SEQ ID NO 7
LENGTH: 272
TYPE: PRT
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: synthesized
US-10-336-210-7

Query Match          91.2%; Score 540; DB 15; Length 272;
Best Local Similarity 90.3%; Pred. No. 6.8e-41;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

Qy 1 DIVMSQSPDSLAVSLGSRVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
Db 160 DIVMSQSPSSLPVSVGKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 219

Qy 61 ESGVPRFSGSGSDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113
Db 220 ESGVPRFSGSGSDTFTLTSSVKTDLAVYCCQYYSYPLTFGAGTKLVK 272
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RESULT 18
US-10-013-173-49
Sequence 49, Application US/10013173
Publication No. US20030095977A1
GENERAL INFORMATION:
APPLICANT: Goshorn, Stephen C.
APPLICANT: Graves, Scott Stoll
APPLICANT: Schultz, Joanne Elaine
APPLICANT: Lin, Yukang
APPLICANT: Sanderson, James A.
APPLICANT: Reno, John M.
TITLE OF INVENTION: STREPTAVIDIN EXPRESSED GENE FUSIONS AND
METHODS OF USE THEREOF
FILE REFERENCE: 690022.547C1
CURRENT APPLICATION NUMBER: US/10/013,173
CURRENT FILING DATE: 2001-12-07
NUMBER OF SEQ ID NOS: 69
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 49
LENGTH: 444
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Predicted amino acid sequence for the CC49 single
chain antibody-genomic streptavidin fusion
OTHER INFORMATION: sequence
US-10-013-173-49

Query Match          91.2%; Score 540; DB 14; Length 444;
Best Local Similarity 90.3%; Pred. No. 1.1e-40;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

Qy 1 DIVMSQSPDSLAVSLGSRVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60
Db 166 DIVMSQSPSSLPVSVGKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 225

Qy 61 ESGVPRFSGSGSDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113
Db 226 ESGVPRFSGSGSDTFTLTSSVKTDLAVYCCQYYSYPLTFGAGTKLVK 278
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```
RESULT 19
US-10-150-762-49
Sequence 49, Application US/10150762
Publication No. US20030103948A1
GENERAL INFORMATION:
APPLICANT: Goshorn, Stephen C.
APPLICANT: Graves, Scott S.
APPLICANT: Schultz, Joanne E.
APPLICANT: Lin, Yukang
APPLICANT: Sanderson, James A.
APPLICANT: Reno, John M.
APPLICANT: Dearstyne, Erica A.
TITLE OF INVENTION: STREPTAVIDIN EXPRESSED GENE FUSIONS AND
METHODS OF USE THEREOF
FILE REFERENCE: 690022.547C2
CURRENT APPLICATION NUMBER: US/10/150,762
CURRENT FILING DATE: 2002-05-17
NUMBER OF SEQ ID NOS: 90
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 49
LENGTH: 444
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Predicted amino acid sequence for the CC49 single
chain antibody-genomic streptavidin fusion
OTHER INFORMATION: sequence
US-10-150-762-49

Query Match          91.2%; Score 540; DB 14; Length 444;
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; Best Local Similarity 90.3%; Pred. No. 1.1e-40;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
Db 166 DIVMSQSPDSLAVSGEKVTLCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 225

QY 61 ESGVDPFRFSGSGTGDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113
Db 226 ESGVDPFRFSGSGTGDTFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 278

RESULT 20
US-10-244-821-49
; Sequence 49, Application US/10244821
; Publication No. US2003014323A1
; GENERAL INFORMATION:
; APPLICANT: Goshorn, Stephen Charles
; APPLICANT: Graves, Scott Stoll
; APPLICANT: Schultz, Joanne Elaine
; APPLICANT: Lin, Yukang
; APPLICANT: Sanderson, James Allen
; APPLICANT: Reno, John M.
; TITLE OF INVENTION: STREPTAVIDIN EXPRESSED GENE FUSIONS AND
; TITLE OF INVENTION: METHODS OF USE THEREOF
; FILE REFERENCE: 690022.547C3
; CURRENT APPLICATION NUMBER: US/10/244,821
; CURRENT FILING DATE: 2002-09-16
; NUMBER OF SEQ ID NOS: 92
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 49
; LENGTH: 444
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Predicted amino acid sequence for the CC49 single
; OTHER INFORMATION: chain antibody-genomic streptavidin fusion
; OTHER INFORMATION: sequence
US-10-244-821-49

Query Match 91.2%; Score 540; DB 14; Length 444;
Best Local Similarity 90.3%; Pred. No. 1.1e-40;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
Db 166 DIVMSQSPDSLAVSGEKVTLCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 225

QY 61 ESGVDPFRFSGSGTGDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113
Db 226 ESGVDPFRFSGSGTGDTFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 278

RESULT 21
US-09-301-593-36
; Sequence 36, Application US/09301593A
; Publication No. US20020052480A1
; GENERAL INFORMATION:
; APPLICANT: Park, John E.
; APPLICANT: Garin-Chesa, Pilar
; APPLICANT: Bamberger, Uwe
; APPLICANT: Leger, Olivier
; APPLICANT: Saldanha, Jose W.
; APPLICANT: Rettig, Wolfgang J.
; TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
; FILE REFERENCE: 0652.1890001
; CURRENT APPLICATION NUMBER: US/09/301,593A
; CURRENT FILING DATE: 1999-04-29
; EARLIER APPLICATION NUMBER: EP 98107925.4
; EARLIER FILING DATE: 1998-04-30
; EARLIER APPLICATION NUMBER: US 60/086,049
; EARLIER FILING DATE: 1998-05-18
```

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; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 36
; LENGTH: 240
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-301-593-36

Query Match 91.0%; Score 539; DB 9; Length 240;
Best Local Similarity 88.6%; Pred. No. 7.3e-41;
Matches 101; Conservative 7; Mismatches 6; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
Db 21 DIVMTQSPDSLAVSLGERATINCKSSQSLLYSRNQKNYLAWYQKPGQPPKLLIFWASTR 80

QY 61 ESGVDPFRFSGSGTGDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELKR 114
Db 81 ESGVDPFRFSGSGTGDTFTLTSSLOAEDVAVYCCQYFSYPLTFGQGTKEIKR 134

RESULT 22
US-10-159-006-36
; Sequence 36, Application US/10159006
; Publication No. US20030143229A1
; GENERAL INFORMATION:
; APPLICANT: Park, John E.
; APPLICANT: Garin-Chesa, Pilar
; APPLICANT: Bamberger, Uwe
; APPLICANT: Leger, Olivier
; APPLICANT: Saldanha, Jose W.
; APPLICANT: Rettig, Wolfgang J.
; TITLE OF INVENTION: FAP-specific Antibody with Improved Producibility
; FILE REFERENCE: 0652.1890002
; CURRENT APPLICATION NUMBER: US/10/159,006
; CURRENT FILING DATE: 2002-06-03
; PRIOR APPLICATION NUMBER: US 09/301,593
; PRIOR FILING DATE: 1999-04-29
; PRIOR APPLICATION NUMBER: EP 98107925.4
; PRIOR FILING DATE: 1998-04-30
; PRIOR APPLICATION NUMBER: US 60/086,049
; PRIOR FILING DATE: 1998-05-18
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 36
; LENGTH: 240
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-159-006-36

Query Match 91.0%; Score 539; DB 14; Length 240;
Best Local Similarity 88.6%; Pred. No. 7.3e-41;
Matches 101; Conservative 7; Mismatches 6; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
Db 21 DIVMTQSPDSLAVSLGERATINCKSSQSLLYSRNQKNYLAWYQKPGQPPKLLIFWASTR 80

QY 61 ESGVDPFRFSGSGTGDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELKR 114
Db 81 ESGVDPFRFSGSGTGDTFTLTSSLOAEDVAVYCCQYFSYPLTFGQGTKEIKR 134

RESULT 23
US-09-791-578-6
; Sequence 6, Application US/09791578
; Patent No. US20020061307A1
; GENERAL INFORMATION:
; APPLICANT: WHITLOW, MARC
; APPLICANT: SHORR, ROBERT G.L.
; APPLICANT: FILPULA, DAVID R.
; APPLICANT: LEE, LIHSYNG S.
; TITLE OF INVENTION: POLYALKYLENE OXIDE-MODIFIED SINGLE CHAIN
```



NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/791.578  
FILING DATE: 26-Feb-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/069,842  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 60/050,472  
FILING DATE: 23-JUN-1997  
APPLICATION NUMBER: US 60/063,074  
FILING DATE: 27-OCT-1997  
APPLICATION NUMBER: US 60/067,341  
FILING DATE: 02-DEC-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: JORGE A. GOLDSTEIN  
REGISTRATION NUMBER: 29,021  
REFERENCE/DOCKET NUMBER: 0977.1840002  
TELEPHONE: 202-371-2600  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 241 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 6:  
US-09-791-578-6  
Query Match 91.0%; Score 539; DB 9; Length 241;  
Best Local Similarity 89.4%; Pred. No. 7.4e-41;  
Matches 101; Conservative 8; Mismatches 4; Indels 0; Gaps 0;  
Qy 1 DIVMSQPSDLSVSLGERVTLNCKSSQSLYSQKKNYLAWYQKQSPKLLIYASAR 60  
Db 1 DIVMSQPSLFPVSGEKVTLCKSSQSLYSQKKNYLAWYQKQSPKLLIYASAR 60  
Qy 61 ESGVPRFSGSGSDTFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 61 ESGVPRFTGSGSDTFTLTISVSKTEDLAVYCCQYYSYPLTFGAGTKLVK 113  
RESULT 24  
US-09-791-540-6  
Sequence 6, Application US/09791540  
Patent No. US20020098192A1  
GENERAL INFORMATION:  
APPLICANT: WHITLOW, MARC  
SHORR, ROBERT G.L.  
FILPULA, DAVID R.  
LEE, LIHSYNG S.  
TITLE OF INVENTION: POLYALKYLENE OXIDE-MODIFIED SINGLE CHAIN  
NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC

COUNTRY: USA  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/791.540  
FILING DATE: 26-Feb-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/069,842  
FILING DATE: 1998-04-30  
APPLICATION NUMBER: US 60/050,472  
FILING DATE: 23-JUN-1997  
APPLICATION NUMBER: US 60/063,074  
FILING DATE: 27-OCT-1997  
APPLICATION NUMBER: US 60/067,341  
FILING DATE: 02-DEC-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: JORGE A. GOLDSTEIN  
REGISTRATION NUMBER: 29,021  
REFERENCE/DOCKET NUMBER: 0977.1840002  
TELEPHONE: 202-371-2600  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 241 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 6:  
US-09-791-540-6  
Query Match 91.0%; Score 539; DB 9; Length 241;  
Best Local Similarity 89.4%; Pred. No. 7.4e-41;  
Matches 101; Conservative 8; Mismatches 4; Indels 0; Gaps 0;  
Qy 1 DIVMSQPSDLSVSLGERVTLNCKSSQSLYSQKKNYLAWYQKQSPKLLIYASAR 60  
Db 1 DIVMSQPSLFPVSGEKVTLCKSSQSLYSQKKNYLAWYQKQSPKLLIYASAR 60  
Qy 61 ESGVPRFSGSGSDTFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 61 ESGVPRFTGSGSDTFTLTISVSKTEDLAVYCCQYYSYPLTFGAGTKLVK 113  
RESULT 25  
US-10-915-069-6  
Sequence 6, Application US/10915069  
Publication No. US20050008650A1  
GENERAL INFORMATION:  
APPLICANT: WHITLOW, MARC  
SHORR, ROBERT G.L.  
FILPULA, DAVID R.  
LEE, LIHSYNG S.  
TITLE OF INVENTION: POLYALKYLENE OXIDE-MODIFIED SINGLE CHAIN  
NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30



GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: July 25, 2005, 07:37:36 ; Search time 29.869 Seconds  
(without alignments)  
284.911 Million cell updates/sec

Title:

Perfect score: 592

Sequence: 1 DIVMSQSPDSLAVSLGRVT.....QQYISYPLTGTGAKTLELKR 114

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

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4: /cgcn2\_6/ptodata/1/iaa/6B.COMB.pep.\*  
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6: /cgcn2\_6/ptodata/1/iaa/backfiles.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	587	99.2	113	4	US-08-961-309-73
2	587	99.2	113	4	US-09-830-7488-13
3	550	92.9	113	5	PCT-US93-08435-6
4	545	92.1	113	5	PCT-US93-08435-8
5	541	91.4	134	4	US-08-961-309-58
6	540	91.2	113	2	US-08-263-911-2
7	540	91.2	113	2	US-08-819-033-1
8	540	91.2	113	3	US-09-025-203-7
9	540	91.2	113	3	US-09-025-203-13
10	540	91.2	113	4	US-08-961-309-71
11	540	91.2	113	4	US-09-999-021-7
12	540	91.2	113	4	US-09-999-021-13
13	540	91.2	113	4	US-09-999-025-7
14	540	91.2	113	4	US-09-999-025-13
15	540	91.2	113	4	US-10-040-997-7
16	540	91.2	113	4	US-10-040-997-13
17	540	91.2	113	4	US-09-999-040-7
18	540	91.2	113	4	US-09-999-040-13
19	540	91.2	113	4	US-09-998-817-7
20	540	91.2	113	4	US-09-998-817-13
21	540	91.2	133	2	US-08-822-028-12
22	540	91.2	133	3	US-08-479-285-12
23	540	91.2	133	4	US-08-503-653A-12
24	540	91.2	275	3	US-08-463-903-8
25	540	91.2	275	3	US-08-463-903-17
26	540	91.2	275	3	US-07-935-695-8
27	540	91.2	275	3	US-07-935-695-17



Qy	1	DIWMSQPSDLAVSLGERVTLNCKSSQSLLYSGNKNVILAWYQQKFGSGPKLLIYWASAR	60
Db	21	DIWMSQPSDLAVSLGERATINCKSSQSLYSSNNKNVILAWYQQKFGGPKLLIYWASTR	80
Qy	61	ESGVPRFSGSGSDTFLTISVQAEADVAVYICQYYSYPLTFGAGTKLEKR	114
Db	81	ESGVPRFSGSGSDTFLTISLQAEADVAVYICQYYSYPLTFGGTKVWIKR	134



QY 1 DIVMSQPSDLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYASAR 60  
Db 1 DIVMSQPSLPSVSGEKTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYASAR 60  
QY 61 ESGVDRFSGSGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 61 ESGVDRFTGSGGTDFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 113

## RESULT 9

US-09-025-203-13  
; Sequence 13, Application US/09025203  
; Patent No. 6348581  
; GENERAL INFORMATION:  
; APPLICANT: Anderson, W.H. Kerr  
; APPLICANT: Tempest, Philip R.  
; APPLICANT: Carr, Frank J.  
; APPLICANT: Harris, William J.  
; APPLICANT: Armour, Kathryn  
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies  
; FILE REFERENCE:  
; CURRENT APPLICATION NUMBER: US/09/025,203  
; CURRENT FILING DATE: 1998-02-18  
; EARLIER APPLICATION NUMBER: PCT US97/19641  
; EARLIER FILING DATE: 1997-10-30  
; EARLIER APPLICATION NUMBER: US 60/030,173  
; EARLIER FILING DATE: 1996-10-31  
; NUMBER OF SEQ ID NOS: 33  
; SOFTWARE: Microsoft Word 97 SR-2  
; SEQ ID NO 13  
; LENGTH: 113  
; TYPE: PRT  
; ORGANISM: Mus musculus  
; FEATURE:  
; NAME/KEY: Murine CC49 VL  
; LOCATION: 1..113  
US-09-025-203-13

Query Match 91.2%; Score 540; DB 3; Length 113;  
Best Local Similarity 90.3%; Pred. No. 1.le-43;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;  
QY 1 DIVMSQPSDLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYASAR 60  
Db 1 DIVMSQPSLPSVSGEKTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYASAR 60  
QY 61 ESGVDRFSGSGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 61 ESGVDRFTGSGGTDFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 113

## RESULT 10

US-08-961-309-71  
; Sequence 71, Application US/08961309  
; Patent No. 6495137  
; GENERAL INFORMATION:  
; APPLICANT: Mezes, Peter S.  
; APPLICANT: Richard, Ruth A.  
; APPLICANT: Johnson, Kimberly S.  
; APPLICANT: Schlom, Jeffrey S.  
; APPLICANT: Kashmiri, Syed V.S.  
; APPLICANT: Shu, Liming  
; APPLICANT: Padlan, Eduardo A.  
; TITLE OF INVENTION: Composite Antibodies of Humanized Human Subgroup IV Light Chain  
; FILE REFERENCE: 3777E  
; CURRENT APPLICATION NUMBER: US/08/961,309  
; CURRENT FILING DATE: 1997-10-30  
; EARLIER APPLICATION NUMBER: US 60/030,173  
; EARLIER FILING DATE: 1996-10-31  
; EARLIER APPLICATION NUMBER: US 08/261,354  
; EARLIER FILING DATE: 1994-06-16  
; EARLIER APPLICATION NUMBER: US 07/964,536

; EARLIER FILING DATE: 1992-10-20  
; EARLIER APPLICATION NUMBER: US 07/510,697  
; EARLIER FILING DATE: 1990-07-17  
; NUMBER OF SEQ ID NOS: 78  
; SOFTWARE: Microsoft Word 97 SR-2  
; SEQ ID NO 71  
; LENGTH: 113  
; TYPE: PRT  
; ORGANISM: Mus musculus  
; FEATURE:  
; NAME/KEY: Murine CC49 VL  
; LOCATION: 1..113  
US-08-961-309-71

Query Match 91.2%; Score 540; DB 4; Length 113;  
Best Local Similarity 90.3%; Pred. No. 1.le-43;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;  
QY 1 DIVMSQPSDLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYASAR 60  
Db 1 DIVMSQPSLPSVSGEKTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYASAR 60  
QY 61 ESGVDRFSGSGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 61 ESGVDRFTGSGGTDFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 113

## RESULT 11

US-09-999-021-7  
; Sequence 7, Application US/09999021  
; Patent No. 6737060  
; GENERAL INFORMATION:  
; APPLICANT: Anderson, W.H. Kerr  
; APPLICANT: Tempest, Philip R.  
; APPLICANT: Carr, Frank J.  
; APPLICANT: Harris, William J.  
; APPLICANT: Armour, Kathryn  
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies  
; FILE REFERENCE:  
; CURRENT APPLICATION NUMBER: US/09/999,021  
; CURRENT FILING DATE: 2001-10-31  
; PRIOR APPLICATION NUMBER: US 09/025,203  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: PCT US97/19641  
; PRIOR FILING DATE: 1997-10-30  
; PRIOR APPLICATION NUMBER: US 60/030,173  
; PRIOR FILING DATE: 1996-10-31  
; NUMBER OF SEQ ID NOS: 33  
; SOFTWARE: Microsoft Word 97 SR-2  
; SEQ ID NO 7  
; LENGTH: 113  
; TYPE: PRT  
; ORGANISM: Mus musculus  
; FEATURE:  
; NAME/KEY: Murine CC49 VK  
; LOCATION: 1..113  
US-09-999-021-7

Query Match 91.2%; Score 540; DB 4; Length 113;  
Best Local Similarity 90.3%; Pred. No. 1.le-43;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;  
QY 1 DIVMSQPSDLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYASAR 60  
Db 1 DIVMSQPSLPSVSGEKTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYASAR 60  
QY 61 ESGVDRFSGSGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 61 ESGVDRFTGSGGTDFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 113

## RESULT 12

US-09-999-021-13

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; Sequence 13, Application US/09999021
; Patent No. 6737060
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,021
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
; US-09-999-021-13
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Query Match 91.2%; Score 540; DB 4; Length 113;
Best Local Similarity 90.3%; Pred. No. 1.1e-43;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSVSLGERVTLNCKSSQSLLYSGNQKYLAWYQOKPGQSPKLLIYWASAR 60
DB 1 DIVMSQSPSPLPVSVGEKVTLSCKSSQSLLYSGNQKYLAWYQOKPGQSPKLLIYWASAR 60

QY 61 ESGVDPDRFSGSGTDTFTLTSSVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
DB 61 ESGVDPDRFTGSGSGTDTFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVLK 113
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```
RESULT 13
US-09-999-025-7
; Sequence 7, Application US/09999025
; Patent No. 6737061
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,025
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 7
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VK
; LOCATION: 1..113
; US-09-999-025-7
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Query Match 91.2%; Score 540; DB 4; Length 113;
Best Local Similarity 90.3%; Pred. No. 1.1e-43;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSVSLGERVTLNCKSSQSLLYSGNQKYLAWYQOKPGQSPKLLIYWASAR 60
DB 1 DIVMSQSPSPLPVSVGEKVTLSCKSSQSLLYSGNQKYLAWYQOKPGQSPKLLIYWASAR 60

QY 61 ESGVDPDRFSGSGTDTFTLTSSVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
DB 61 ESGVDPDRFTGSGSGTDTFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVLK 113

RESULT 14
US-09-999-025-13
; Sequence 13, Application US/09999025
; Patent No. 6737061
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/999,025
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
; US-09-999-025-13

Query Match 91.2%; Score 540; DB 4; Length 113;
Best Local Similarity 90.3%; Pred. No. 1.1e-43;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSVSLGERVTLNCKSSQSLLYSGNQKYLAWYQOKPGQSPKLLIYWASAR 60
DB 1 DIVMSQSPSPLPVSVGEKVTLSCKSSQSLLYSGNQKYLAWYQOKPGQSPKLLIYWASAR 60

QY 61 ESGVDPDRFSGSGTDTFTLTSSVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
DB 61 ESGVDPDRFTGSGSGTDTFTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVLK 113

RESULT 15
US-10-040-997-7
; Sequence 7, Application US/10040997
; Patent No. 6752990
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal Antibodies
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/10/040,997
; CURRENT FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US 09/025,203
; PRIOR FILING DATE: 1998-02-18
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; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
US-09-999-040-13

Query Match          91.2%; Score 540; DB 4; Length 113;
Best Local Similarity 90.3%; Pred. No. 1.1e-43;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60
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Db 1 DIVMSQSPSLPVSVEKVTLSCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60
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QY 61 ESGVPRFSGSGGTDFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
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Db 61 ESGVPRFTGSGGTDFTLTISSVKTEDLAVYCCQYYSYPLTFGAGTKLVLK 113

RESULT 19
US-09-998-817-7
; Sequence 7, Application US/09998817
; Patent No. 6753420
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/998,817
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US/09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR FILING DATE: FILING DATE: 1997-10-30
; PRIOR FILING DATE: FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft Word 97 SR-2
; SEQ ID NO 7
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VK
; LOCATION: 1..113
US-09-998-817-7

Query Match          91.2%; Score 540; DB 4; Length 113;
Best Local Similarity 90.3%; Pred. No. 1.1e-43;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60
    |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 1 DIVMSQSPSLPVSVEKVTLSCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60
    |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||

QY 61 ESGVPRFSGSGGTDFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
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Db 61 ESGVPRFTGSGGTDFTLTISSVKTEDLAVYCCQYYSYPLTFGAGTKLVLK 113

RESULT 20
US-09-998-817-13
; Sequence 13, Application US/09998817
; Patent No. 6753420
; GENERAL INFORMATION:
; APPLICANT: Anderson, W.H. Kerr
; APPLICANT: Tempest, Philip R.
; APPLICANT: Carr, Frank J.
; APPLICANT: Harris, William J.
; APPLICANT: Armour, Kathryn
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; TITLE OF INVENTION: High Affinity Humanized Anti-TAG-72 Monoclonal
; FILE REFERENCE:
; CURRENT APPLICATION NUMBER: US/09/998,817
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: US/09/025,203
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: PCT US97/19641
; PRIOR FILING DATE: FILING DATE: 1997-10-30
; PRIOR APPLICATION NUMBER: APPLICATION NUMBER: US 60/030,173
; PRIOR FILING DATE: FILING DATE: 1996-10-31
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Microsoft word 97 SR-2
; SEQ ID NO 13
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: Murine CC49 VL
; LOCATION: 1..113
US-09-998-817-13

Query Match          91.2%; Score 540; DB 4; Length 113;
Best Local Similarity 90.3%; Pred. No. 1.1e-43;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60
    |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 1 DIVMSQSPSLPVSVEKVTLSCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60
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QY 61 ESGVPRFSGSGGTDFTLTISVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
    |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db 61 ESGVPRFTGSGGTDFTLTISSVKTEDLAVYCCQYYSYPLTFGAGTKLVLK 113

RESULT 21
US-08-822-028-12
; Sequence 12, Application US/08822028
; Patent No. 5991813
; GENERAL INFORMATION:
; APPLICANT: MEZES, PETER S
; APPLICANT: GOURLIE, BRIAN B
; APPLICANT: RIXON, MARK W
; APPLICANT: ANDERSON, WH KERR
; APPLICANT: KAPLAN, DONALD A
; APPLICANT: SCHOLOM, JERREY
; TITLE OF INVENTION: A NOVEL FAMILY OF HIGH AFFINITY,
; MODIFIED ANTIBODIES FOR CANCER TREATMENT
; NUMBER OF SEQUENCES: 74
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DUANE C ULMER
; STREET: P.O. BOX 1967
; CITY: MIDLAND
; STATE: MICHIGAN
; COUNTRY: USA
; ZIP: 48641-1967
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/822,028
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/040,687
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: ULMER, DUANE C
; REGISTRATION NUMBER: 34,941
; REFERENCE/DOCKET NUMBER: C-37,075C
; TELECOMMUNICATION INFORMATION:
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TELEPHONE: (517) 636-8104  
; INFORMATION FOR SEQ ID NO: 12:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 133 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-822-028-12

Query Match 91.2%; Score 540; DB 2; Length 133;  
Best Local Similarity 90.3%; Pred. No. 1.3e-43;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;  
  
Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYASAR 60  
Db 21 DIVMSQSPSLPVSVEKVTLSCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYASAR 80  
  
Qy 61 ESGVPRFSGSGSDTFTLTISVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 81 ESGVPRFTGSGSDTFTLTISSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 133

RESULT 22  
US-08-479-285-12  
; Sequence 12, Application US/08479285  
; Patent No. 6207815  
; GENERAL INFORMATION:  
; APPLICANT: MEZES, PETER S  
; APPLICANT: GOURLIE, BRIAN B  
; APPLICANT: RIXON, MARK W  
; APPLICANT: ANDERSON, WH KERR  
; APPLICANT: KAPLAN, DONALD A  
; APPLICANT: SCHLOM, JEFFREY  
; TITLE OF INVENTION: A NOVEL FAMILY OF HIGH AFFINITY,  
; TITLE OF INVENTION: MODIFIED ANTIBODIES FOR CANCER TREATMENT  
; NUMBER OF SEQUENCES: 74  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: DUANE C ULMER  
; STREET: P.O. BOX 1967  
; CITY: MIDLAND  
; STATE: MICHIGAN  
; COUNTRY: USA  
; ZIP: 48641-1967  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/479,285  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 536  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 08/040687  
; FILING DATE: 31-MAR-1993  
; ATTORNEY/AGENT INFORMATION:  
; NAME: ULMER, DUANE C  
; REGISTRATION NUMBER: 34,941  
; REFERENCE/DOCKET NUMBER: C-37, 075C  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (517) 636-8104  
; INFORMATION FOR SEQ ID NO: 12:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 133 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-479-285-12

Query Match 91.2%; Score 540; DB 3; Length 133;  
Best Local Similarity 90.3%; Pred. No. 1.3e-43;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYASAR 60  
Db 21 DIVMSQSPSLPVSVEKVTLSCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYASAR 80  
  
Qy 61 ESGVPRFSGSGSDTFTLTISVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 81 ESGVPRFTGSGSDTFTLTISSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 133

RESULT 23  
US-09-503-653A-12  
; Sequence 12, Application US/09503653A  
; Patent No. 6641999  
; GENERAL INFORMATION:  
; APPLICANT: MEZES, Peter S  
; APPLICANT: GOURLIE, Brian B  
; APPLICANT: RIXON, Mark W  
; APPLICANT: ANDERSON, WH Kerr  
; APPLICANT: KAPLAN, Donald A  
; APPLICANT: SCHLOM, Jeffrey  
; TITLE OF INVENTION: Probing Method for Identifying Antibodies  
; TITLE OF INVENTION: Specific for Selected Antigens  
; FILE REFERENCE: 37075H-CIP1  
; CURRENT APPLICATION NUMBER: US/09/503,653A  
; CURRENT FILING DATE: 2000-02-14  
; PRIOR APPLICATION NUMBER: US 08/040,687  
; PRIOR FILING DATE: 1993-03-31  
; PRIOR APPLICATION NUMBER: US 07/424,362  
; PRIOR FILING DATE: 1989-10-19  
; PRIOR APPLICATION NUMBER: US 07/261,942  
; PRIOR FILING DATE: 1988-10-24  
; PRIOR APPLICATION NUMBER: US 07/259,943  
; PRIOR FILING DATE: 1988-10-19  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: MICROSOFT word 97 SR-2  
; SEQ ID NO 12  
; LENGTH: 133  
; TYPE: PRT  
; ORGANISM: Mus musculus  
; FEATURE:  
; NAME/KEY: SIGNAL  
; LOCATION: -20..-1  
; NAME/KEY: CHAIN  
; LOCATION: 1..113  
US-09-503-653A-12

Query Match 91.2%; Score 540; DB 4; Length 133;  
Best Local Similarity 90.3%; Pred. No. 1.3e-43;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYASAR 60  
Db 21 DIVMSQSPSLPVSVEKVTLSCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYASAR 80  
  
Qy 61 ESGVPRFSGSGSDTFTLTISVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
Db 81 ESGVPRFTGSGSDTFTLTISSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 133

RESULT 24  
US-08-463-903-8  
; Sequence 8, Application US/08463903  
; Patent No. 6071515  
; GENERAL INFORMATION:  
; APPLICANT: MEZES, Peter S.  
; APPLICANT: RICHARD, Ruth A.  
; APPLICANT: AFFHOLTER, Joseph A.  
; APPLICANT: KOTITE, Nicolas J.  
; TITLE OF INVENTION: Dimer and Multimer Forms of Single Chain Polypeptides  
; FILE REFERENCE: 40224A US  
; CURRENT APPLICATION NUMBER: US/08/463,903  
; CURRENT FILING DATE: 1995-06-05  
; EARLIER APPLICATION NUMBER: US 07/935,695

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; EARLIER FILING DATE: 1992-08-21
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: MS-Word for Windows, Ver. 7.0
; SEQ ID NO 8
; LENGTH: 275
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; NAME/KEY: SCFV UHM8.1
; LOCATION: 1..275
US-08-463-903-8

Query Match          91.2%; Score 540; DB 3; Length 275;
Best Local Similarity 90.3%; Pred. No. 2.9e-43;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60
Db 23 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 82

QY 61 ESGVDPDRFSGSGGTDFLTITSSVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
Db 83 ESGVDPDRFSGSGGTDFLTITSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 135

RESULT 25
US-08-463-903-17
; Sequence 17, Application US/08463903
; Patent No. 6071515
; GENERAL INFORMATION:
; APPLICANT: Mezes, Peter S.
; APPLICANT: Richard, Ruth A.
; APPLICANT: Affholter, Joseph A.
; APPLICANT: Kotite, Nicolas J.
; TITLE OF INVENTION: Dimer and Multimer Forms of Single Chain Polypeptides
; FILE REFERENCE: 40224A US
; CURRENT APPLICATION NUMBER: US/08/463,903
; CURRENT FILING DATE: 1995-06-05
; EARLIER APPLICATION NUMBER: US 07/935,695
; EARLIER FILING DATE: 1992-08-21
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: MS-Word for Windows, Ver. 7.0
; SEQ ID NO 17
; LENGTH: 275
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; NAME/KEY: CC49 scFv from pPY22
; LOCATION: 1..275
US-08-463-903-17

Query Match          91.2%; Score 540; DB 3; Length 275;
Best Local Similarity 90.3%; Pred. No. 2.9e-43;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60
Db 23 DIVMSQSPDLSAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 82

QY 61 ESGVDPDRFSGSGGTDFLTITSSVQAEDVAVYCCQYYSYPLTFGAGTKLELK 113
Db 83 ESGVDPDRFSGSGGTDFLTITSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 135

Search completed: July 25, 2005, 08:12:50
Job time : 29.869 secs
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OM protein - protein search, using sw model

Run on: July 25, 2005, 07:32:04 ; Search time 120.969 Seconds  
(without alignments)  
364.478 Million cell updates/sec

Title: US-10-058-069-9\_COPY\_21\_134  
Perfect score: 592.74  
Sequence: 1 DIVMSQSPSLAVSLGSRVT.....QQYYSYPLTFGAGTKLELKR 114

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database : A\_Geneseq\_16Dec04:\*

1: Geneseqp1980s:\*

2: Geneseqp1990s:\*

3: Geneseqp2000s:\*

4: Geneseqp2001s:\*

5: Geneseqp2002s:\*

6: Geneseqp2003as:\*

7: Geneseqp2003bs:\*

8: Geneseqp2004s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	592	100.0	240	5	AEE27927 Human CC4
3	592	100.0	240	6	ABB82836 Antibody
4	587	99.2	113	6	ADB17745 Humanised
5	587	99.2	113	7	ADG46865 Humanised
6	587	99.2	113	6	ADB17751 Humanised
7	587	99.2	133	7	ADG46872 Humanised
8	550	92.9	113	2	AAR50313 Humanised
9	545	92.1	113	2	AAR50314 Humanised
10	541	91.4	134	2	AAY50690 Human Hum
11	541	91.4	134	6	ADB17730 Human Hum
12	541	91.4	134	7	ADG46850 Human Hum
13	541	91.4	259	7	ADG32322 Mouse scf
14	541	91.4	339	7	ADG32359 Precursor
15	540	91.2	113	2	AAR56964 CC49 V-ll
16	540	91.2	113	2	AAY42267 Murine an
17	540	91.2	113	2	AAY42267 Murine an
18	540	91.2	113	2	AAY05759 Anti-TAG-
19	540	91.2	113	5	AAB78320 Murine CC
20	540	91.2	113	6	ABU09371 Light cha
21	540	91.2	113	6	ABU09365 Murine TA
22	540	91.2	113	6	ABU10146 Murine TA
23	540	91.2	113	6	ABU10140 Murine TA
24	540	91.2	113	6	ADB17743 Native CC
25	540	91.2	113	6	ABU62757 Murine mo

ABU62763	Murine mo	113	6	ABU62763
AEE39069	Murine CC	113	7	AEE39069
AEE39063	Murine CC	113	7	AEE39063
ADG46863	Murine CC	113	7	ADG46863
ADG71406	Mouse CC4	113	8	ADG71406
AAY57051	Anino aci	113	3	AAY57051
AAY90719	CC49 VL r	113	3	AAY90719
AAY02138	Mouse par	113	4	AAY02138
ADK66824	Mouse CC4	113	7	ADK66824
ABU31422	Protein u	242	4	ABU31422
ABU31421	Protein u	262	4	ABU31421
ABU31423	Protein u	271	4	ABU31423
ABU31424	Protein u	272	4	ABU31424
ABU39018	CC49 sing	444	6	ABU39018
AAR56966	CC49 VL-L	553	2	AAR56966
AAR56967	CC49 VL-L	553	2	AAR56967
AAR97181	A multiva	553	2	AAR97181
AAR97180	A multiva	553	2	AAR97180
AAY05762	CC49 sing	553	2	AAY05762
AAY05763	CC49 sing	553	2	AAY05763
AAY50161	Human res	240	2	AAY50161
AAR55865	CC49 VL/	242	2	AAR55865
AAR95439	Linked fu	242	2	AAR95439
AAR88101	Single ch	242	2	AAR88101
ABU07937	A single-	242	3	ABU07937
AAY57256	4-4-20 Vh	242	3	AAY57256
ABU27681	Bivalent	242	3	ABU27681
AAY80926	Single ch	242	3	AAY80926
AAY54835	Antibody	242	3	AAY54835
ABU61811	Antigen b	242	6	ABU61811
AAR88096	Single-ch	244	3	AAR88096
ABU07932	A heterob	244	3	ABU07932
AAY57251	4-4-20 Vh	244	3	AAY57251
ABU27676	Bivalent	244	3	ABU27676
AAY80921	Single ch	244	3	AAY80921
ABU61806	Antigen b	244	6	ABU61806
AAR37646	Sequence	248	2	AAR37646
AAR97382	CC49 VL-P	248	2	AAR97382
AAR97888	CC49/218	249	2	AAR97888
AAR81524	Single ch	257	5	AAR81524
AAY75157	CC49/218	257	5	AAY75157
ABG73145	CC49/218	257	6	ABG73145
ABG73865	CC49/218	257	6	ABG73865
AAR97380	CC49/212	262	2	AAR97380
AAR97381	PLAP CC49	264	2	AAR97381
AAY75158	CC49/218	269	5	AAY75158
ABG73146	CC49/218	269	6	ABG73146
ABG73866	CC49/218	269	6	ABG73866
AAO17498	Antibody-	432	5	AAO17498
AAO17495	Antibody-	480	5	AAO17495
AAR80999	A protein	483	2	AAR80999
ABU07935	A divalen	483	3	ABU07935
AAY57254	Divalent	483	3	AAY57254
ABU27679	Bivalent	483	3	ABU27679
AAY80924	Bivalent	483	3	AAY80924
ABU61809	Divalent	483	6	ABU61809
AAR37649	Sequence	486	2	AAR37649
AAM49760	TNF-selec	601	5	AAM49760
AAO17494	Antibody-	614	5	AAO17494
AAM49759	TNF-selec	658	5	AAM49759
AAY50145	Antibody	113	2	AAY50145
ABG55565	Amino aci	120	4	ABG55565
ADG46871	Protein e	161	7	ADG46871
AAR38320	Sequence	171	2	AAR38320
AAY50693	Plasmid p	171	2	AAY50693
AAY57184	Amino aci	171	2	AAY57184
AAR38319	Sequence	274	2	AAR38319
AAY50692	Human Hum	274	2	AAY50692
AAY57183	Amino aci	274	2	AAY57183
ADB17738	Hum4 VL-C	274	6	ADB17738
ADG46858	Hum4VL-11	274	7	ADG46858
AAR38321	Sequence	284	2	AAR38321

99 536 90.5 284 2 AAY50694 Plasmid p  
100 536 90.5 284 2 AAY57185 Aay57185 Amino aci

ALIGNMENTS

RESULT 1  
AAY95243  
ID AAY95243 standard; protein; 137 AA.

XX AAY95243;  
AC  
XX  
XX 12-SEP-2003 (revised)  
DT 29-AUG-2000 (first entry)  
XX  
XX Humanised antibody HuCC49 light chain variable region.  
XX  
XX Humanised antibody; monoclonal antibody; CC49; HuCC49; CDR;  
KW complementarity determining region; mouse; human; carcinoma;  
KW colon cancer; tumor associated glycoprotein-72; TAG-72; tumour marker;  
KW diagnosis; therapy.  
XX

OS Mus musculus.  
OS Homo sapiens.  
OS Chimeric.

XX  
FH Key Location/Qualifiers  
FT Region 44..59  
FT /note= "CDR1"  
FT Region 76..82  
FT /note= "CDR2"  
FT Region 115..123  
FT /note= "CDR3"

XX WO200026394-A1.

XX 11-MAY-2000.

XX 29-OCT-1999; 99WO-US025552.

XX 31-OCT-1998; 98US-0106534P.

PR 02-NOV-1998; 98US-0106757P.

XX (USSH ) US DEPT HEALTH & HUMAN SERVICES.

XX Kashmiri SVS, Padlan EA, Schlom J;

PI WPI; 2000-365637/31.

XX  
XX Chimeric variants of CC49 monoclonal antibodies useful for detecting and  
PT treating cancers associated with the expression of the pancarcinoma tumor  
PT -associated antigen TAG-72.

XX Disclosure; Fig 4; 76pp; English.

XX The present sequence is that of the light chain variable region (VL) of  
CC HuCC49, a humanised monoclonal antibody (MAb) formed by grafting  
CC hypervariable regions from murine MAb CC49 into VL and VH frameworks of  
CC human MAbs LEN and 21/28' CL, respectively, while retaining murine  
CC framework residues required for integrity of the antigen combining site  
CC structure. HuCC49 binds to the human pancarcinoma tumor associated  
CC glycoprotein-72 (TAG-72), which is found on the surface of certain human  
CC tumours. The invention is directed towards mouse-human chimeric variants  
CC of CC49 MAbs with minimal murine content, to methods of making such  
CC variants, and their therapeutic application. The invention provides  
CC complementarity determining region (CDR) variants of huCC49 in which  
CC fewer than all 6 CDRs of CC49 are present, and specificity determining  
CC region (SDR) variants of huCC49 in which only SDRs of at least 1 CDR from  
CC CC49 are present. Particular variants of HuCC9 have either L-CDR1 and/or  
CC L-CDR2 from human MAb LEN. These variants have the same or 2-fold lower  
CC affinity constant than HuCC49. Other variants additionally have  
CC corresponding human residues at position 97 of L-CDR3, and positions 60,

CC 61, 62 and 64 of H-CDR2. The variants are used in claimed methods of  
CC treating cancer and for detecting cancer cells that express TAG-72.  
CC (Updated on 12-SEP-2003 to standardise OS field)  
XX  
SQ Sequence 137 AA;

Query Match 100.0%; Score 592; DB 3; Length 137;  
Best Local Similarity 100.0%; Pred. No. 4.3e-41;  
Matches 114; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLISGNQKYLAWYQQKPGQSPKLLIYWASAR 60  
|||||  
Db 21 DIVMSQSPDSLAVSLGERVTLNCKSSQSLISGNQKYLAWYQQKPGQSPKLLIYWASAR 80  
OY 61 ESGVDPDRFSGSGGTDFLTITSSVQAEDVAVYCCQYYSYPLTFGAGTKLELKR 114  
|||||  
Db 81 ESGVDPDRFSGSGGTDFLTITSSVQAEDVAVYCCQYYSYPLTFGAGTKLELKR 134

RESULT 2

AAE27927  
ID AAE27927 standard; protein; 240 AA.

XX AAE27927;

XX AC  
XX 27-DEC-2002 (first entry)

XX Human CC49 antibody light chain protein.

DE Human; CC49 antibody; C2B8 antibody; tumour associated antigen; TAG-72;  
XX neoplasm; neoplastic disorder; haematologic neoplasm; colon cancer;  
KW non-Hodgkin's lymphoma; haematologic malignancy; tumour.  
XX  
XX Homo sapiens.

XX WO200260955-A2.

XX 08-AUG-2002.

XX 29-JAN-2002; 2002WO-US002373.

XX 29-JAN-2001; 2001US-0264318P.

PR 16-NOV-2001; 2001US-0331481P.

XX (IDEC-) IDEC PHARM CORP.

XX Braslawsky GR, Hanna N, Chinn P;

PI WPI; 2002-698547/75.

XX N-PSDB; AAD45756.

XX Novel domain deleted CC49 antibody reactive with tumor associated antigen  
PT -72, or C2B8 antibody reactive with CD20, useful for treating  
PT myelosuppressed patient suffering from a neoplastic disorder.

XX Example 1; Fig 5A; 74pp; English.

XX The present invention relates to domain deleted CC49 or C2B8 antibodies.  
CC Domain deleted CC49 antibodies comprise a heavy chain human CC49 domain  
CC deleted sequence in which CH2 domain has been deleted and are reactive  
CC with tumour associated antigen (TAG)-72. The C2B8 antibodies are reactive  
CC with CD20 and comprise a heavy chain having a sequence of a derived  
CC domain deleted C2B8 construct where the CH2 domain has been deleted.  
CC Sequences of the invention are useful for imaging a neoplasm. They are  
CC also useful for treating myelosuppressed patients suffering from  
CC neoplastic disorder such as haematologic neoplasm, preferably non-  
CC Hodgkin's lymphoma. Antibodies of the invention are also used to treat  
CC neoplastic disorder, colon cancer and haematologic malignancy. They are  
CC useful for reducing tumour size, inhibiting tumour growth and/or  
CC prolonging the survival time of tumour-bearing animals and for treating  
CC tumours. The present sequence is human CC49 light chain protein. This  
CC sequence is used in the exemplification of the invention  
XX

```
SQ Sequence 240 AA;
Query Match 100.0%; Score 592; DB 5; Length 240;
Best Local Similarity 100.0%; Pred. No. 7.4e-41;
Matches 114; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DIWMSQSPDSLAVSLGERTVLNCKSSQSLLYSGNQKNYLAWYQOKPQSPKLLIYWASAR 60
DB 21 DIWMSQSPDSLAVSLGERTVLNCKSSQSLLYSGNQKNYLAWYQOKPQSPKLLIYWASAR 80
QY 61 ESGVPRFSGSGSDTFTLTISVQAEADVAVVYCCQYYSYPLTFGAGTKLELKR 114
DB 81 ESGVPRFSGSGSDTFTLTISVQAEADVAVVYCCQYYSYPLTFGAGTKLELKR 134

RESULT 3
ADB17745
ID ABB82836 standard; protein; 240 AA.
XX
AC ABB82836;
XX
DT 31-MAR-2003 (first entry)
XX
DE Antibody huCC49 light chain.
XX
KW CC49; antibody; cytostatic; antiallergic; antianemic; antiasthmatic;
KW veotropic; immunomodulator; protozoacide; antidiabetic; nephrotropic;
KW thyromimetic; hepatotropic; haemostatic; antileptotic; antibacterial;
KW neuroprotective; antipsoriatic; antirheumatic; antiarthritic; antiulcer;
KW dermatological; immunosuppressive; antinflammatory.
XX
OS Homo sapiens.
XX
PN WO200296948-A2.
XX
PD 05-DEC-2002.
XX
PF 29-JAN-2002; 2002WO-US0002374.
XX
PR 29-JAN-2001; 2001US-0264318P.
PR 16-NOV-2001; 2001US-0331481P.
PR 21-DEC-2001; 2001US-0341858P.
XX
PA (IDEC-) IDEC PHARM CORP.
XX
PI Braslowsky GR, Hanna N, Chinn P, Hariharan K;
XX
DR WPI; 2003-140446/13.
DR N-PSDB; ABZ24020.
XX
PT Novel dimeric antibody useful for treating immune disorder and neoplastic
PT disorder, has several non-covalently associated monomeric subunits.
XX
PS Example 1; Fig 5A; 78pp; English.
XX
CC The invention relates to a dimeric antibody (I) comprising several
CC monomeric subunits, where the monomeric subunits are non-covalently
CC associated. (I) is useful for treating a disorder, especially immune
CC disorder, and neoplastic disorder such as relapsed Hodgkin's disease,
CC resistant Hodgkin's disease high grade, low grade and intermediate grade
CC non-Hodgkin's lymphomas, B cell chronic lymphocytic leukemia (B-CLL),
CC lymphoplasmacytoid lymphoma (LPL), mantle cell lymphoma (MCL), follicular
CC lymphoma (FL), diffuse large cell lymphoma (DLCL), Burkitt's lymphoma,
CC AIDS-related lymphomas, monocytic B cell lymphoma, angioimmunoblastic
CC lymphadenopathy, small lymphocytic, follicular, diffuse large cell,
CC diffuse small cleaved cell, large cell immunoblastic lymphoblastoma,
CC small, non-cleaved, Burkitt's and non-Burkitt's, follicular, mixed small
CC cleaved and large cell lymphomas, in a mammal (see ABZ24017 for a
CC detailed description of the various uses of (I)). The present sequence
CC represents the antibody huCC49 light chain
XX
SQ Sequence 240 AA;
Query Match 99.2%; Score 587; DB 6; Length 113;
Best Local Similarity 100.0%; Pred. No. 9.3e-41;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DIWMSQSPDSLAVSLGERTVLNCKSSQSLLYSGNQKNYLAWYQOKPQSPKLLIYWASAR 60
DB 21 DIWMSQSPDSLAVSLGERTVLNCKSSQSLLYSGNQKNYLAWYQOKPQSPKLLIYWASAR 80
QY 61 ESGVPRFSGSGSDTFTLTISVQAEADVAVVYCCQYYSYPLTFGAGTKLELKR 114
DB 81 ESGVPRFSGSGSDTFTLTISVQAEADVAVVYCCQYYSYPLTFGAGTKLELKR 134

RESULT 4
ADB17745
ID ADB17745 standard; protein; 113 AA.
XX
AC ADB17745;
XX
DT 20-NOV-2003 (first entry)
XX
DE Humanised CC49 light chain variable region fragment.
XX
KW anti-tumour-associated glycoprotein-72; TAG-72; antibody;
KW complementarity determining region; CDR; cancer;
KW malignant cell specific binding; hypersensitivity anti-mouse antibody;
KW HAMA; accelerated whole body clearance; human; mouse.
XX
OS Mus musculus.
XX
OS Homo sapiens.
XX
PN US6495137-B1.
XX
PD 17-DEC-2002.
XX
PF 30-OCT-1997; 97US-00961309.
XX
PR 19-APR-1990; 90US-00510697.
PR 20-OCT-1992; 92US-00964536.
PR 16-JUN-1994; 94US-00261354.
PR 31-OCT-1996; 96US-0030173P.
XX
PA (DOWC ) DOW CHEM CO.
XX
PI Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;
PI Padlan EA;
XX
DR WPI; 2003-615251/58.
XX
PT New composite and humanized anti-tumor-associated glycoprotein-72
PT monoclonal antibody useful for detecting or treating cancer.
XX
PS Claim 3; Fig 32A; 130pp; English.
XX
CC The invention relates to a humanised or composite anti-tumour-associated
CC glycoprotein-72 (TAG-72) antibody or its fragment comprising a
CC complementarity determining region (CDR)-grafted light chain having light
CC chain CDRs of a murine anti-TAG-72 antibody grafted onto a human subgroup
CC IV kappa light chain. The composition is suitable for the treatment and
CC detection of cancer. The novel antibody has the ability to bind
CC specifically to malignant cells and does not bind to normal cells. It
CC greatly minimises or eliminates harmful hypersensitivity anti-mouse
CC antibody (HAMA) responses. The relatively small size and human character
CC of the composite Hum4V-L, V-H single chain antibodies accelerate whole
CC body clearance, thus reducing the waiting period after injection before
CC surgery is initiated. The present sequence represents the amino acid
CC sequence of the humanised CC49 light chain variable region fragment.
XX
SQ Sequence 113 AA;
Query Match 99.2%; Score 587; DB 6; Length 113;
Best Local Similarity 100.0%; Pred. No. 9.3e-41;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSGNOKNYLAWYQKPGSPKLLIYWASAR 60  
DB 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSGNOKNYLAWYQKPGSPKLLIYWASAR 60  
QY 61 ESGVDPDRFSGSGGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
DB 61 ESGVDPDRFSGSGGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
RESULT 5  
ID ADG46865 standard; protein; 113 AA.  
XX ADG46865;  
AC ADG46865;  
DT 11-MAR-2004 (first entry)  
XX Humanised CC49 VL protein fragment with Hum4 VL framework regions.  
DE Humanised CC49 VL protein fragment with Hum4 VL framework regions.  
XX Anti-tumour-associated glycoprotein-72; anti-TAG-72 antibody;  
KW complementarity determining region; CDR-grafted light chain;  
KW subgroup IV kappa light chain; gene-therapy; immunology;  
KW genetic engineering; cancer; mouse; human; chimeric.  
XX Chimeric.  
OS Unidentified.  
OS Mus musculus.  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Region 1..23  
FT /note= "Human LEN light chain variable region FR1"  
FT Region 24..40  
FT /note= "Murine CC49 light chain variable region CDR1"  
FT Region 41..55  
FT /note= "Human LEN light chain variable region FR2"  
FT Region 56..62  
FT /note= "Murine CC49 light chain variable region CDR2"  
FT Region 63..94  
FT /note= "Human LEN light chain variable region FR3"  
FT Region 95..103  
FT /note= "Murine CC49 light chain variable region CDR3"  
FT Region 104..113  
FT /note= "Human LEN light chain variable region FR4"  
XX US2003165498-A1.  
XX  
XX 04-SEP-2003.  
XX  
XX 25-SEP-2002; 2002US-00255478.  
XX  
PR 19-APR-1990; 90US-00510697.  
PR 20-OCT-1992; 92US-00964536.  
PR 16-JUN-1994; 94US-00261354.  
PR 31-OCT-1996; 96US-0030173P.  
PR 30-OCT-1997; 97US-00961309.  
XX  
XX (MEZE/) MEZES P S.  
PA (RICH/) RICHARD R A.  
PA (JOHN/) JOHNSON K S.  
PA (SCHL/) SCHLOM J.  
PA (KASH/) KASHMIRI S V S.  
PA (SHUL/) SHU L.  
PA (PADL/) PADLAN E A.  
XX  
XX Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
PI Padlan EA;  
XX WPI; 2003-615251/58.  
XX  
XX New humanized or composite anti-TAG-72 monoclonal antibody with subgroup  
PT IV kappa light chain framework regions, useful in the fields of

PT immunology and genetic engineering, particularly for detecting and/or  
PT treating cancer.  
XX Disclosure; SEQ ID NO 73; 133pp; English.  
PS  
XX The invention relates to a humanised or composite anti-tumour-associated  
CC glycoprotein-72 (anti-TAG-72) antibody or its fragment. The antibody  
CC comprises a complementarity determining region (CDR)-grafted light chain  
CC having non-human CDRs grafted to a human subgroup IV kappa light chain.  
CC The invention is useful in gene-therapy. The methods and compositions of  
CC the present invention are useful in the fields of immunology and genetic  
CC engineering, particularly for detecting and/or treating cancer. The  
CC present sequence is humanised CC49 VL protein fragment with Hum4 VL  
CC framework regions used in the exemplification of the invention.  
XX Sequence 113 AA;  
SQ  
Query Match 99.2%; Score 587; DB 7; Length 113;  
Best Local Similarity 100.0%; Pred. No. 9.3e-41;  
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSGNOKNYLAWYQKPGSPKLLIYWASAR 60  
DB 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSGNOKNYLAWYQKPGSPKLLIYWASAR 60  
QY 61 ESGVDPDRFSGSGGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
DB 61 ESGVDPDRFSGSGGTDTFTLTSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
RESULT 6  
ADBI7751  
ID ADBI7751 standard; protein; 133 AA.  
XX ADBI7751;  
AC ADBI7751;  
DT 20-NOV-2003 (first entry)  
XX Humanised CC49 light chain variable region.  
DE Humanised CC49 light chain variable region.  
XX anti-tumour-associated glycoprotein-72; TAG-72; antibody;  
KW complementarity determining region; CDR; cancer;  
KW malignant cell specific binding; hypersensitivity anti-mouse antibody;  
KW HAMA; accelerated whole body clearance; human; mouse.  
XX Mus musculus.  
OS Homo sapiens.  
XX US6495137-B1.  
XX 17-DEC-2002.  
PD  
XX 30-OCT-1997; 97US-00961309.  
PF  
XX 19-APR-1990; 90US-00510697.  
PR 20-OCT-1992; 92US-00964536.  
PR 16-JUN-1994; 94US-00261354.  
PR 31-OCT-1996; 96US-0030173P.  
XX  
XX (DOMC ) DOW CHEM CO.  
PA  
XX Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
PI Padlan EA;  
XX WPI; 2003-615251/58.  
DR N-PSDB; ADBI7749.  
XX  
XX New composite and humanized anti-tumour-associated glycoprotein-72  
PT monoclonal antibody useful for detecting or treating cancer.  
XX Disclosure; Col 111-112; 130pp; English.  
XX The invention relates to a humanised or composite anti-tumour-associated



CC glycoprotein-72 (TAG-72) antibody or its fragment comprising a  
CC complementarity determining region (CDR)-grafted light chain having light  
CC chain CDRs of a murine anti-TAG-72 antibody grafted onto a human subgroup  
CC IV kappa light chain. The composition is suitable for the treatment and  
CC detection of cancer. The novel antibody has the ability to bind  
CC specifically to malignant cells and does not bind to normal cells. It  
CC greatly minimises or eliminates harmful hypersensitivity anti-mouse  
CC antibody (HAMA) responses. The relatively small size and human character  
CC of the composite Hum4V-L, V-H single chain antibodies accelerate whole  
CC body clearance, thus reducing the waiting period after injection before  
CC surgery is initiated. The present sequence represents the amino acid  
CC sequence of the humanised CC49 light chain variable region.  
XX  
XX Sequence 133 AA;  
SQ  
Query Match 99.2%; Score 587; DB 6; Length 133;  
Best Local Similarity 100.0%; Pred. No. 1.1e-40;  
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60  
DB 21 DIVMSQSPDLSAVSLGERVTLNCKSSQLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 80  
QY 61 ESGVDPFRSGSGTGDTLTITSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
DB 81 ESGVDPFRSGSGTGDTLTITSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 133  
RESULT 7  
ADG46872  
ID ADG46872 standard; protein; 133 AA.  
XX  
AC ADG46872;  
AC  
DT 11-MAR-2004 (first entry)  
XX  
DE Humanised CC49 VL protein with Hum4 VL framework regions.  
XX  
KW Anti-tumour-associated glycoprotein-72; anti-TAG-72 antibody;  
KW complementarity determining region; CDR-grafted light chain;  
KW subgroup IV kappa light chain; gene-therapy; immunology;  
KW genetic engineering; cancer; mouse; human; fusion protein.  
XX  
OS Chimeric.  
OS Unidentified.  
OS Mus musculus.  
OS Homo sapiens.  
XX  
PN US2003165498-A1.  
XX  
PD 04-SEP-2003.  
XX  
PF 25-SEP-2002; 2002US-00255478.  
XX  
PR 19-APR-1990; 90US-00510697.  
PR 20-OCT-1992; 92US-00964536.  
PR 16-JUN-1994; 94US-00261354.  
PR 31-OCT-1996; 96US-0030173P.  
PR 30-OCT-1997; 97US-00961309.  
XX  
PA (MEZE/) MEZES P S.  
PA (RICH/) RICHARD R A.  
PA (JOHN/) JOHNSON K S.  
PA (SCHL/) SCHLOM J.  
PA (KASH/) KASHMIRI S V S.  
PA (SHUL/) SHU L.  
PA (PADL/) PADLAN E A.  
XX  
PI Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
PI Padlan EA;  
XX  
XX WPI; 2003-898033/82.  
DR N-PSDB; ADG46870.

XX New humanized or composite anti-TAG-72 monoclonal antibody with subgroup  
PT IV kappa light chain framework regions, useful in the fields of  
PT immunology and genetic engineering, particularly for detecting and/or  
PT treating cancer.  
XX  
XX Disclosure; SEQ ID NO 80; 133pp; English.  
XX  
XX The invention relates to a humanised or composite anti-tumour-associated  
CC glycoprotein-72 (anti-TAG-72) antibody or its fragment. The antibody  
CC comprises a complementarity determining region (CDR)-grafted light chain  
CC having non-human CDRs grafted to a human subgroup IV kappa light chain.  
CC The invention is useful in gene-therapy. The methods and compositions of  
CC the present invention are useful in the fields of immunology and genetic  
CC engineering, particularly for detecting and/or treating cancer. The  
CC present sequence is humanised CC49 VL protein with Hum4 VL framework  
CC regions used in the exemplification of the invention.  
XX  
XX Sequence 133 AA;  
SQ  
Query Match 99.2%; Score 587; DB 7; Length 133;  
Best Local Similarity 100.0%; Pred. No. 1.1e-40;  
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 DIVMSQSPDLSAVSLGERVTLNCKSSQLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 60  
DB 21 DIVMSQSPDLSAVSLGERVTLNCKSSQLLYSGNQKNYLAWYQQKPGQSPKLLIYWASAR 80  
QY 61 ESGVDPFRSGSGTGDTLTITSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113  
DB 81 ESGVDPFRSGSGTGDTLTITSSVQAEADVAVYCCQYYSYPLTFGAGTKLELK 133  
RESULT 8  
AAR50313  
ID AAR50313 standard; protein; 113 AA.  
XX  
AC AAR50313;  
XX  
XX 25-MAR-2003 (revised)  
DT 05-OCT-1994 (first entry)  
XX  
DE Humanised light chain variable region Pfhlzcl-1.  
XX  
KW Monoclonal antibody; Plasmodium falciparum; CDR;  
KW complementarity determining region; fusion protein; murine; variable;  
KW light; heavy; chain; malaria.  
XX  
OS Synthetic.  
XX  
FH Key Location/Qualifiers  
FT Region 24..40  
FT /label= CDR1  
FT Region 56..62  
FT /label= CDR2  
FT Region 95..103  
FT /label= CDR3  
XX  
PN WO9405690-A1.  
XX  
PD 17-MAR-1994.  
XX  
PF 08-SEP-1993; 93WO-US008435.  
XX  
PR 09-SEP-1992; 92US-00941654.  
XX  
PA (SMIK ) SMITHKLINE BEECHAM CORP.  
PA (USNA ) US SEC OF NAVY.  
PA (USSA ) US SEC OF ARMY.  
XX  
PI Gross MS, Rosenberg M, Sadoff JC, Hoffman S, Sylvester DR;  
PI Charoenvit Y, Hurlie M;  
XX

[illegible]

RESULT 9	
AAR50314	
ID	AAR50314 standard; protein; 113 AA.
XX	
AC	AAR50314;
XX	
XX	
DT	25-MAR-2003 (revised)
DT	05-OCT-1994 (first entry)
XX	
XX	
DE	Humanised light chain variable region pfhzlcl-2.
XX	
XX	
KW	Monoclonal antibody; Plasmodium falciparum; CDR;
KW	complementarity determining region; fusion protein; murine; variable;
KW	light; heavy; chain; malaria.
XX	
OS	Synthetic.
XX	
PH	Key
FT	Region
FT	24..40
FT	/label= CDR1
FT	56..62
FT	/label= CDR2
FT	95..103
FT	/label= CDR3
XX	
PN	W09405690-A1.
XX	
PD	17-MAR-1994.
XX	
PF	08-SEP-1993; 93WO-US008435.
XX	
PR	09-SEP-1992; 92US-00941654.
XX	
PA	(SMIK ) SMITHKLINE BEECHAM CORP.
PA	(USNA ) US SEC OF NAVY.
PA	(USSA ) US SEC OF ARMY.
XX	
FI	Gross MS, Rosenberg M, Sadoff JC, Hoffman S, Sylvester DR;
PI	Charoenvit Y, Hurie M;
XX	
DR	WPI; 1994-101115/12.

DR	N-PSDB; AAQ44828.
XX	
PT	New engineered antibodies and fusion proteins for preventing Plasmodium
PT	infection - contg. murine antibody CDR sequences, and corresp. nucleic
PT	acid, vectors and transformed cells.
XX	
PS	Claim 5; Fig 3; 98pp; English.
XX	
CC	Naturally-occurring (AAQ44841-42) and synthetic (AAQ44825-28) variable
CC	light chain and variable heavy chain sequences derived from murine mAb
CC	NFS2 are provided. Murine mAb NFS2, its variable chain peptides, CDRs,
CC	functional fragments, Fab fragments, and analogs are useful in prodn. of
CC	fusion proteins, esp. engineered antibodies. These prods. are used to
CC	protect humans against Plasmodium infections. (Updated on 25-MAR-2003 to
XX	correct FN field.)
XX	
SQ	Sequence 113 AA;
	Query Match                    92.1%; Score 545; DB 2; Length 113;
	Best Local Similarity       90.3%; Pred. No. 2.6e-37;
	Matches 102; Conservative 5; Mismatches 6; Indels 0; Gaps 0
Qy	1 DIVWQSQSDSLAVSLGERVTLNCKSSOSLLYSGNQKNLAWYQQKPGSPKKLIYWASAR 60
Dd	1 DIVWTQSPDSLAVSLGERATINCKSSOSLLYSNQKNLAWYQQKPGPPKLIITWASTR 60
	:
Qy	61 ESGVPDRFSGSGGTDTLTITISSVQAEDVAVYYCQQYYSYELTTFGAGTKLELK 113
Dd	61 ESGVPDRFSGSGGTDTLTITISSLQAEDVAVYYCQQYYSYPRTFGGKTVEIK 113
RESULT 10	
AAVS0690	
ID	AAVS0690 standard; protein; 134 AA.
XX	
AC	AAVS0690;
XX	
DT	09-FEB-2000 (first entry)
XX	
DE	Human Hum4 VL Clal-HindIII segment encoded protein.
XX	
KW	Human; antibody; humanized; anti-tumor; sialylated glycoprotein antibody;
KW	TAG-72; cytostatic; cancer antigen; detection; carcinoma lesion;
KW	diagnostic; treatment.
XX	
OS	Homo sapiens.
XX	
FN	US5976531-A.
XX	
PD	02-NOV-1999.
XX	
PF	16-JUN-1994; 94US-00261354.
XX	
ER	19-APR-1990; 90US-00510697.
PR	20-OCT-1992; 92US-00964536.
XX	
PA	(DOWC ) DOW CHEM CO.
XX	
FI	Johnson KS, Mezes PS, Richard RA;
XX	
DR	WPI; 1999-632731/54.
DR	N-PSDB; AAZ23970.
XX	
PT	New humanized anti-TAG-72 antibodies, used for the detection, in vivo
PT	imaging and treatment of cancers.
XX	
PS	Example 1; Fig 10A-E; 83pp; English.
XX	
CC	This invention describes novel humanized anti-tumor associated sialylated
CC	glycoprotein antibodies (TAG-72) which have cytostatic activity. The
CC	antibodies have binding specificity for the cancer antigen TAG-72. They
CC	can be used for the in vivo detection of carcinoma lesions. They can also
CC	be used for in vitro diagnostics. They can also be modified with

CC therapeutic agents e.g. a radionuclide, drug, biological response  
CC modifier, toxin or another antibody for the treatment of cancers. The  
CC humanized anti-TAG-72 antibodies can reduce harmful anti-mouse antibody  
CC hypersensitivity reactions

XX Sequence 134 AA;  
SQ

Query Match 91.4%; Score 541; DB 2; Length 134;  
Best Local Similarity 88.6%; Pred. No. 6.5e-37;  
Matches 101; Conservative 6; Mismatches 7; Indels 0; Gaps 0;

OY 1 DIVMSQPSDLSAVSLGERVTLNCKSSQSLLYSGNQNYLAWYQKQSPKLLIYWASAR 60  
Db 21 DIVMTQSPDLSAVSLGERATINCKSSQSLVSYNNKNYLAAYQKQPPKLLIYWASTR 80  
OY 61 ESGVDPFRFSGSGGTDFTLTISVQAEADVAVYCCQYYSYPLTFGGAGTKLELKR 114  
Db 81 ESGVDPFRFSGSGGTDFTLTISLQAEADVAVYCCQYYSYPLTFGGGTVKVIKR 134

RESULT 11  
ADBI17730  
ID ADBI17730 standard; protein; 134 AA.  
XX  
AC ADBI17730;  
XX  
DT 20-NOV-2003 (first entry)  
XX  
DE Human Hum4 light chain variable region.  
XX  
KW anti-tumour-associated glycoprotein-72; TAG-72; antibody;  
KW complementarity determining region; CDR; cancer;  
KW malignant cell specific binding; hypersensitivity anti-mouse antibody;  
KW HAMA; accelerated whole body clearance; human.  
XX  
OS Homo sapiens.  
XX  
PN US6495137-B1.  
XX  
PD 17-DEC-2002.  
XX  
PF 30-OCT-1997; 97US-00961309.  
XX  
PR 19-APR-1990; 90US-00510697.  
PR 20-OCT-1992; 92US-00964536.  
PR 16-JUN-1994; 94US-00261354.  
PR 31-OCT-1996; 96US-0030173P.  
XX  
PA (DOWC ) DOW CHEM CO.  
XX  
PI Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
PI Padlan EA;  
XX  
DR WPI; 2003-615251/58.  
DR N-PSDB; ADBI17729.  
XX  
XX New composite and humanized anti-tumor-associated glycoprotein-72  
PT monoclonal antibody useful for detecting or treating cancer.  
XX  
XX Example 1; Fig 10; 130pp; English.  
XX  
CC The invention relates to a humanised or composite anti-tumour-associated  
CC glycoprotein-72 (TAG-72) antibody or its fragment comprising a  
CC complementarity determining region (CDR)-grafted light chain having light  
CC chain CDRs of a murine anti-TAG-72 antibody grafted onto a human subgroup  
CC IV kappa light chain. The composition is suitable for the treatment and  
CC detection of cancer. The novel antibody has the ability to bind  
CC specifically to malignant cells and does not bind to normal cells. It  
CC greatly minimises or eliminates harmful hypersensitivity anti-mouse  
CC antibody (HAMA) responses. The relatively small size and human character  
CC of the composite Hum4V-L, V-H single chain antibodies accelerate whole  
CC body clearance, thus reducing the waiting period after injection before  
CC surgery is initiated. The present sequence represents the amino acid

CC sequence of the human Hum4 light chain variable region.  
XX  
SQ Sequence 134 AA;  
XX

Query Match 91.4%; Score 541; DB 6; Length 134;  
Best Local Similarity 88.6%; Pred. No. 6.5e-37;  
Matches 101; Conservative 6; Mismatches 7; Indels 0; Gaps 0;

OY 1 DIVMSQPSDLSAVSLGERVTLNCKSSQSLLYSGNQNYLAWYQKQSPKLLIYWASAR 60  
Db 21 DIVMTQSPDLSAVSLGERATINCKSSQSLVSYNNKNYLAAYQKQPPKLLIYWASTR 80  
OY 61 ESGVDPFRFSGSGGTDFTLTISVQAEADVAVYCCQYYSYPLTFGGAGTKLELKR 114  
Db 81 ESGVDPFRFSGSGGTDFTLTISLQAEADVAVYCCQYYSYPLTFGGGTVKVIKR 134

RESULT 12  
ADG46850  
ID ADG46850 standard; protein; 134 AA.  
XX  
AC ADG46850;  
XX  
DT 11-MAR-2004 (first entry)  
XX  
DE Human Hum4VL protein.  
XX  
KW Anti-tumour-associated glycoprotein-72; anti-TAG-72 antibody;  
KW complementarity determining region; CDR-grafted light chain;  
KW subgroup IV kappa light chain; gene-therapy; immunology;  
KW genetic engineering; cancer; human.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Misc-difference 18 /note= "Encoded by CCC"  
FT Region 44..60 /note= "Complementarity determining region 1"  
FT Region 76..82 /note= "Complementarity determining region 2"  
FT Region 115..123 /note= "Complementarity determining region 3"  
FT Misc-difference 132 /note= "Encoded by AAA"  
XX  
PN US2003165498-A1.  
XX  
PD 04-SEP-2003.  
XX  
PF 25-SEP-2002; 2002US-00255478.  
XX  
PR 19-APR-1990; 90US-00510697.  
PR 20-OCT-1992; 92US-00964536.  
PR 16-JUN-1994; 94US-00261354.  
PR 31-OCT-1996; 96US-0030173P.  
PR 30-OCT-1997; 97US-00961309.  
XX  
PA (MEZE/) MEZES P S.  
PA (RICH/) RICHARD R. A.  
PA (JOHN/) JOHNSON K S.  
PA (SCHL/) SCHLOM J.  
PA (KASH/) KASHMIRI S V S.  
PA (SHUL/) SHU L.  
PA (PADL/) PADLAN E A.  
XX  
PI Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
PI Padlan EA;  
XX  
DR WPI; 2003-898033/82.  
DR N-PSDB; ADG46849.  
XX  
XX New humanized or composite anti-TAG-72 monoclonal antibody with subgroup



CC Accordingly, a method is described for antibody based resistance in  
CC plants such that the undesirable and expensive chemical controls often  
CC used in agriculture are not required. The present invention provides  
CC antibodies, recombinant antibodies and fragments thereof, as well as  
CC fusion proteins that can be used as pathogen-specific antibodies targeted  
CC to different plant cell compartments. As such, these fungicidal agents  
CC confer a broad spectrum of disease resistance in both economically  
CC important crops and ornamental plants. This polypeptide is a precursor  
CC fusion protein of the order [AFP - linker - antibody fragment] of the  
CC invention.

XX SQ Sequence 329 AA;  
Query Match 91.4%; Score 541; DB 7; Length 329;  
Best Local Similarity 87.7%; Pred. No. 1.5e-36;  
Matches 100; Conservative 10; Mismatches 4; Indels 0; Gaps 0;  
QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60  
DB 208 DIVLSQSPSSLVSVGKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASTR 267  
QY 61 ESGVPRFRFGSGSGTDTLTITSSVQAEADVAVYVCOQYYSYPLTFGAGTKLELKR 114  
DB 268 ESGVPRFRFGSGSGTDTLTITSSVKAEDLAVYVCOQYYSYPLTFGAGTKLEIKR 321

RESULT 15  
AAR56964  
ID AAR56964 standard; protein; 113 AA.  
XX  
AC AAR56964;  
XX  
DT 25-MAR-2003 (revised)  
DT 14-FEB-1995 (first entry)  
XX  
DE CC49 V-light.  
XX  
KW Multivalent single chain antibody; antigen binding site; diagnosis;  
KW peptide linker; variable; light; heavy; VL; VH; CC antibody;  
KW tumour-associated glycoprotein 72 antigen; TAG-72.  
XX  
OS Mus musculus.  
XX  
PN WO9413806-A1.  
XX  
PD 23-JUN-1994.  
XX  
PF 10-DEC-1993; 93WO-US012039.  
XX  
PR 11-DEC-1992; 92US-00990263.  
XX  
PA (DOWC ) DOW CHEM CO.  
XX  
PI Mezes PS, Gourlie BB;  
XX  
DR WPI; 1994-217882/26.  
DR N-PSDB; AAO68657.  
XX  
PT Multivalent single chain antibodies with two or more active antigen  
PT binding sites - are used for use in diagnosis and therapeutics, reaching  
PT their target tissue more rapidly and are cleared more quickly from the  
PT body.  
XX  
PS Claim 3; Fig 3; 48pp; English.  
XX  
CC Multivalent single chain antibodies are formed by using a peptide linker  
CC to covalently link two or more single chain antibodies, each single chain  
CC antibody having a variable light (VL) domain linked to a variable heavy  
CC (VH) chain domain by a peptide linker. The VL and VH domains are pref.  
CC obtained from a series of CC antibodies against tumour-associated  
CC glycoprotein 72 antigen (TAG-72), eg. see AAO68657 for VL of CC49 and  
CC AAO68658 for VH of CC49. The linker is pref. based on the helical linker  
CC designated 205C, eg. see AAR56963. Two plasmids were constructed to

CC produce multivalent single chain antibodies. The sequences of p49LHLH and  
CC p49LHLH are given in AAO68659-60. (Updated on 25-MAR-2003 to correct PN  
CC field.)  
XX  
SQ Sequence 113 AA;

Query Match 91.2%; Score 540; DB 2; Length 113;  
Best Local Similarity 90.3%; Pred. No. 6.7e-37;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;  
QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60  
DB 1 DIVMSQSPSSLVSVGKVTLSCKSSQSLLYSGNQKNYLAWYQKQSPKLLIYWASAR 60  
QY 61 ESGVPRFRFGSGSGTDTLTITSSVQAEADVAVYVCOQYYSYPLTFGAGTKLELK 113  
DB 61 ESGVPRFRFGSGSGTDTLTITSSVKTEDLAVYVCOQYYSYPLTFGAGTKLVK 113

RESULT 16  
AA42267  
ID AA42267 standard; protein; 113 AA.  
XX  
AC AA42267;  
XX  
DT 01-DEC-1999 (first entry)  
XX  
DE Murine anti-TAG-72 monoclonal antibody CC49 VL region.  
XX  
KW Tumour-associated glycoprotein; TAG-72; carcinoma; cancer; tumour;  
KW antibody; therapy; immunogenic; humanise.  
XX  
OS Mus sp.  
XX  
PN WO943816-A1.  
XX  
PD 02-SEP-1999.  
XX  
PF 25-FEB-1998; 98WO-US003679.  
XX  
PR 25-FEB-1998; 98WO-US003679.  
XX  
PA (DOWC ) DOW CHEM CO.  
XX  
PI Anderson WHK, Tempest PR, Carr FU, Harris WJ, Armour K;  
XX  
DR WPI; 1999-540593/45.  
XX  
PT New humanized murine antibody specific for TAG-72 antigen, for treatment  
PT and diagnosis of cancer.  
XX  
PS Example; Fig 2; 75pp; English.

XX  
CC This sequence represents murine monoclonal antibody CC49 light chain  
CC variable region (VL). CC49 binds TAG-72 (tumour-associated glycoprotein),  
CC a human carcinoma antigen expressed by various human tumour cells.  
CC CC49 could be used as an anticancer agent; however, as it is from a  
CC foreign species, it may cause a neutralising antibody response in the  
CC patient. In addition, its constant domains are murine and it may not  
CC exhibit human effector functions. To overcome these potential problems,  
CC humanised CC49 derivative antibodies were produced. These were produced  
CC by obtaining the CC49 heavy and light chain variable sequences,  
CC identifying the complementarity determining regions (CDRs) and grafting  
CC the CDR-encoding DNA sequences onto human antibody framework DNA  
CC sequences. Such humanised antibodies can be used in cancer therapy. The  
CC antibodies can be to treat or prevent TAG-72-expressing cancers (e.g. of  
CC breast, ovary, prostate or colon) and to detect TAG-72-expressing cells,  
CC either in vitro or in vivo (particularly by tumour imaging to identify  
CC tumours and metastases before surgery), for diagnosis or prognosis. As  
CC the humanised antibodies are not significantly immunogenic, (i.e. they do  
CC not induce a human anti-murine antibody or allergic response, or non-  
CC specific cytotoxicity) they can be administered repeatedly. They retain  
CC specificity for TAG-72, and have improved clearance (allowing efficient

[illegible]

```
RESULT 19
AAU78320
ID AAU78320 standard; protein; 113 AA.
XX
AC AAU78320;
XX
XX 05-JUN-2002 (first entry)
DT
XX
XX Murine CC49 light chain variable region (VK).
DE
XX
XX CC49; antibody; light chain variable region; humanised antibody;
KW
KW tumour-associated glycoprotein-72; TAG-72; pancreaticoma; cancer;
KW
KW tumour imaging; VK.
XX
OS Mus musculus.
XX
XX US6348581-B1.
PN
XX 19-FEB-2002.
PD
XX
XX 18-FEB-1998; 98US-00025203.
PF
XX
XX 31-OCT-1996; 96US-0030173P.
PR
XX 30-OCT-1997; 97WO-US019641.
PR
XX
XX (DOWC ) DOW CHEM CO.
PA
XX
XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;
PI
XX WPI; 2002-266545/31.
XX
XX New humanized antibody which binds tumor-associated glycoprotein-72,
PT useful for diagnosis of cancer e.g. for tumor imaging and for treatment
PT of cancer.
XX
XX Example 1; Fig 2; 40pp; English.
PS
XX
XX The invention describes a humanised antibody which specifically binds
CC tumour-associated glycoprotein-72 (TAG-72), a human pancreaticoma antigen
CC expressed by human tumour cells. The antibody comprises a NEMW-grafted
CC humanised heavy chain variable region (VH), and a REI-grafted humanised
CC light chain variable region (VL), or its fragment which specifically
CC binds TAG-72. A composition containing the antibody is useful for
CC treatment of cancer, and for in vivo or in vitro detection of cancer e.g.
CC for tumour imaging. This sequence represents the murine CC49 light chain
CC variable region used in production of the TAG-72 binding humanised
CC antibody of the invention
XX
SQ Sequence 113 AA;
Query Match 91.2%; Score 540; DB 5; Length 113;
Best Local Similarity 90.3%; Pred. No. 6.7e-37;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;
Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSNGKNYLAWYQKPGQSPKLLIYWASAR 60
Db 1 DIVMSQSPSSLPVSVGKVTLSCKSSQSLYSNGKNYLAWYQKPGQSPKLLIYWASAR 60
Qy 61 ESGVDPDRFSGSGSTDTLTISVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113
Db 61 ESGVDPDRFTGSGSGTDTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 113
RESULT 20
ABU09371
ID ABU09371 standard; protein; 113 AA.
XX
AC ABU09371;
XX
XX 08-JUL-2003 (first entry)
DT
XX
XX Light chain variable region of murine CC49.
DE
Murine; mouse; humanised monoclonal antibody; TAG-72; colon cancer;
KW
KW tumour-associated glycoprotein-72; immunodetection; tumour cell;
KW
KW surgical excision; disease status; cytostatic; CC49;
KW
KW light chain variable region.
XX
OS Mus sp.
XX
XX US2003013856-A1.
PN
XX 16-JAN-2003.
PD
XX
XX 31-OCT-2001; 2001US-00040997.
PF
XX
XX 31-OCT-1996; 96US-0030173P.
PR
XX 30-OCT-1997; 97WO-US019641.
PR
XX 18-FEB-1998; 98US-00025203.
XX
XX (ANDE/) ANDERSON W H K.
PA (TEMP/) TEMPEST P R.
PA (CARR/) CARR F J.
PA (HARR/) HARRIS W J.
PA (ARMO/) ARMOUR K.
XX
XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;
PI
XX WPI; 2003-401607/38.
XX
XX Novel humanized antibody derived from a murine antibody that specifically
PT binds tumor-associated glycoprotein-72, useful for treating and detecting
PT cancer.
XX
XX Claim 2; Fig 4; 29pp; English.
PS
XX
XX The present invention relates to a novel humanised monoclonal antibody,
CC and its fragments which specifically binds tumour-associated glycoprotein
CC -72 (TAG-72), where the humanised monoclonal antibody is derived from a
CC murine monoclonal antibody (e.g. CC49) that binds TAG-72. The humanised
CC monoclonal antibody, and its fragments are useful for the treating and
CC detection of TAG-72 cancers which express TAG-72 (e.g. colon cancer). The
CC cancer is detected by the immunodetection of in vivo tumour cells, which
CC may be removed by surgical excision. The humanised monoclonal antibody of
CC the invention is useful as a immunodiagnostic agent both in vivo and in
CC vitro, and also for repeated monitoring of the disease status of a
CC patient. The present sequence represents the light chain variable region
CC of murine CC49
XX
SQ Sequence 113 AA;
Query Match 91.2%; Score 540; DB 6; Length 113;
Best Local Similarity 90.3%; Pred. No. 6.7e-37;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;
Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSNGKNYLAWYQKPGQSPKLLIYWASAR 60
Db 1 DIVMSQSPSSLPVSVGKVTLSCKSSQSLYSNGKNYLAWYQKPGQSPKLLIYWASAR 60
Qy 61 ESGVDPDRFSGSGSTDTLTISVQAEADVAVYCCQYYSYPLTFGAGTKLELK 113
Db 61 ESGVDPDRFTGSGSGTDTLTSSVKTEDLAVYCCQYYSYPLTFGAGTKLVK 113
RESULT 21
ABU09365
ID ABU09365 standard; protein; 113 AA.
XX
AC ABU09365;
XX
XX 08-JUL-2003 (first entry)
DT
XX
XX Murine monoclonal antibody CC49 VK (CC49MuVK).
DE
Murine; mouse; humanised monoclonal antibody; TAG-72; colon cancer;
```



KW tumour-associated glycoprotein-72; immunodetection; tumour cell;  
KW surgical excision; disease status; cytostatic; CC49MuVK.  
OS Mus sp.

XX US2003013856-A1.  
XX 16-JAN-2003.

PF 31-OCT-2001; 2001US-00040997.

XX 31-OCT-1996; 96US-0030173P.  
PR 30-OCT-1997; 97WO-US019641.  
PR 18-FEB-1998; 98US-00025203.

XX (ANDE/) ANDERSON W H K.  
PA (TEMP/) TEMPEST P R.  
PA (CARR/) CARR F J.  
PA (HARR/) HARRIS W J.  
PA (ARMO/) ARMOUR K.

XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;  
PI WPI; 2003-401607/38.

XX Novel humanized antibody derived from a murine antibody that specifically  
XX binds tumor-associated glycoprotein-72, useful for treating and detecting  
PT cancer.

XX Claim 2; Fig 2; 29pp; English.

XX The present invention relates to a novel humanised monoclonal antibody,  
CC and its fragments which specifically binds tumour-associated glycoprotein  
CC -72 (TAG-72), where the humanised monoclonal antibody is derived from a  
CC murine monoclonal antibody (e.g. CC49) that binds TAG-72. The humanised  
CC monoclonal antibody, and its fragments are useful for the treating and  
CC detection of TAG-72 cancers which express TAG-72 (e.g. colon cancer). The  
CC cancer is detected by the immunodetection of in vivo tumour cells, which  
CC may be removed by surgical excision. The humanised monoclonal antibody of  
CC the invention is useful as a immunodiagnostic agent both in vivo and in  
CC vitro, and also for repeated monitoring of the disease status of a  
CC patient. The present sequence represents murine monoclonal antibody CC49  
CC VK (CC49MuVK)

XX Sequence 113 AA;

Query Match 91.2%; Score 540; DB 6; Length 113;  
Best Local Similarity 90.3%; Pred. No. 6.7e-37;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60  
DB 1 DIVMSQSPSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60

QY 61 ESGVPRFSGSGSDTFTLTISVQAEDEVAVYVCQYYSVPLTFGAGTKLEK 113  
DB 61 ESGVPRFTGSGSGDTFTLTISSVKTEDLAVYVCQYYSVPLTFGAGTKLVK 113

RESULT 22  
ABU10146  
ID ABU10146 standard; protein; 113 AA.

XX AC ABU10146;  
XX DT 11-AUG-2003 (first entry)  
XX Murine TAG-72 antibody CC49 light chain variable region.

XX Mouse; tumour-associated glycoprotein 72; TAG-72; antibody; CC49; cancer;  
KW tumour; tumour imaging; serum clearance.  
XX Mus sp.

XX Key Location/Qualifiers  
FH Region 24..40  
FT /label= CDR1  
FT /note= "Complementarity determining region 1"  
FT 56..62  
FT /label= CDR2  
FT /note= "Complementarity determining region 2"  
FT 95..103  
FT /label= CDR3  
FT /note= "Complementarity determining region 3"

XX US2003013854-A1.

XX 16-JAN-2003.

XX 31-OCT-2001; 2001US-00999021.

XX 31-OCT-1996; 96US-0030173P.  
PR 30-OCT-1997; 97WO-US019641.  
PR 18-FEB-1998; 98US-00025203.

XX (ANDE/) ANDERSON W H K.  
PA (TEMP/) TEMPEST P R.  
PA (CARR/) CARR F J.  
PA (HARR/) HARRIS W J.  
PA (ARMO/) ARMOUR K.

XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;  
PI WPI; 2003-438920/41.

XX Novel humanized monoclonal antibody which specifically binds tumor-  
PT associated glycoprotein-72 useful for treating cancer and in vivo imaging  
PT of tumors or cancer cells expressing the tumor-associated glycoprotein-  
XX 72.

PS Disclosure; Fig 4; 29pp; English.

XX The invention relates to a humanised antibody (or its fragment) which  
CC specifically binds tumour-associated glycoprotein 72 (TAG-72) (the  
CC antibody or its fragment is derived from a murine antibody which  
CC specifically binds TAG-72). The humanised antibody is useful for in vivo  
CC treatment of cancer, by intravenously administering a radionuclide-  
CC labelled antibody, detecting tumour cells using a radionuclide activity  
CC probe, and removing the detected tumour cells by surgical excision. The  
CC radionuclide is (125)I or (131)I. A composition containing the humanised  
CC antibody is useful for in vivo treatment of a mammal having a TAG-72  
CC expressing cancer. A composition containing the humanised antibody is  
CC useful for in vitro immunodetection of TAG-72 expressing cancer cells,  
CC where the antibody or its fragments of the composition are bound to a  
CC solid support and also for in vivo tumour imaging. The humanised  
CC antibodies have little or no reduced immunogenicity in humans over murine  
CC and chimeric antibodies and have improved serum clearance and metabolic  
CC properties. The antibodies can be used over prolonged time periods. The  
CC present sequence represents the amino acid sequence of the murine TAG-72  
CC antibody CC49 light chain variable region

XX Sequence 113 AA;

Query Match 91.2%; Score 540; DB 6; Length 113;  
Best Local Similarity 90.3%; Pred. No. 6.7e-37;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60  
DB 1 DIVMSQSPSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQOKPGQSPKLLIYWASAR 60

QY 61 ESGVPRFSGSGSDTFTLTISVQAEDEVAVYVCQYYSVPLTFGAGTKLEK 113  
DB 61 ESGVPRFTGSGSGDTFTLTISSVKTEDLAVYVCQYYSVPLTFGAGTKLVK 113



RESULT 23  
ABU10140  
ID ABU10140 standard; protein; 113 AA.  
XX AC ABU10140;  
XX DT 11-AUG-2003 (first entry)  
XX DE Murine TAG-72 antibody CC49VK.  
XX KW Mouse; tumour-associated glycoprotein 72; TAG-72; antibody; CC49VK;  
XX KW cancer; tumour; tumour imaging; serum clearance.  
XX OS Mus sp.  
XX FH Key  
XX FT Region  
XX FT Location/Qualifiers  
XX FT 24..40  
XX FT /label= CDR1  
XX FT /note= "Complementarity determining region 1"  
XX FT 56..62  
XX FT /label= CDR2  
XX FT /note= "Complementarity determining region 2"  
XX FT 95..103  
XX FT /label= CDR3  
XX FT /note= "Complementarity determining region 3"  
XX US2003013854-A1.  
XX 16-JAN-2003.  
XX 31-OCT-2001; 2001US-00999021.  
XX 31-OCT-1996; 96US-0030173P.  
XX 30-OCT-1997; 97WO-US019641.  
XX 18-FEB-1998; 98US-00025203.  
XX (ANDE/) ANDERSON W H K.  
XX (TEMP/) TEMPEST P R.  
XX (CARR/) CARR F J.  
XX (HARR/) HARRIS W J.  
XX (ARMO/) ARMOUR K.  
XX Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;  
XX WPI; 2003-438920/41.  
XX Novel humanized monoclonal antibody which specifically binds tumor-  
XX associated glycoprotein-72 useful for treating cancer and in vivo imaging  
XX of tumors or cancer cells expressing the tumor-associated glycoprotein-  
XX 72.  
XX Disclosure; Fig 2; 29pp; English.  
XX The invention relates to a humanised antibody (or its fragment) which  
XX specifically binds tumour-associated glycoprotein 72 (TAG-72) (the  
XX antibody or its fragment is derived from a murine antibody which  
XX specifically binds TAG-72). The humanised antibody is useful for in vivo  
XX treatment of cancer, by intravenously administering a radionuclide-  
XX labelled antibody, detecting tumour cells using a radionuclide activity  
XX probe, and removing the detected tumour cells by surgical excision. The  
XX radionuclide is (125)I or (131)I. A composition containing the humanised  
XX antibody is useful for in vivo treatment of a mammal having a TAG-72  
XX expressing cancer. A composition containing the humanised antibody is  
XX useful for in vitro immunodetection of TAG-72 expressing cancer cells,  
XX where the antibody or its fragments of the composition are bound to a  
XX solid support and also for in vivo tumour imaging. The humanised  
XX antibodies have little or no reduced immunogenicity in humans over murine  
XX and chimeric antibodies and have improved serum clearance and metabolic  
XX properties. The antibodies can be used over prolonged time periods. The  
XX present sequence represents the amino acid sequence of the murine TAG-72  
XX antibody CC49VK  
XX Sequence 113 AA;

Query Match 91.2%; Score 540; DB 6; Length 113;  
Best Local Similarity 90.3%; Pred. No. 6.7e-37;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;  
SQ Sequence 113 AA;

Query Match 91.2%; Score 540; DB 6; Length 113;  
Best Local Similarity 90.3%; Pred. No. 6.7e-37;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

OY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNKNYLAWYQOKPGSQKLLIYWASAR 60  
DB 1 DIVMSQSPSLPLVSGEKVTLSCKSQSLLYSGNKNYLAWYQOKPGSQKLLIYWASAR 60  
OY 61 ESGVPRFSGSGGTFTLTISVQABDVAVYCCQYYSYPLTFGAGTKLELK 113  
DB 61 ESGVPRFSGSGGTFTLTISVSKTEDLAVYCCQYYSYPLTFGAGTKLVLK 113

## RESULT 24

ADB17743  
ID ADB17743 standard; protein; 113 AA.

XX AC ADB17743;

XX DT 20-NOV-2003 (first entry)

XX DE Native CC49 light chain variable region.

XX KW anti-tumour-associated glycoprotein-72; TAG-72; antibody;  
XX KW complementarity determining region; CDR; cancer;  
XX KW malignant cell specific binding; hypersensitivity anti-mouse antibody;  
XX KW HAMA; accelerated whole body clearance; mouse.

XX OS Mus musculus.

XX PN US6495137-B1.

XX PD 17-DEC-2002.

XX PF 30-OCT-1997; 97US-00961309.

XX PR 19-APR-1990; 90US-00510697.

XX PR 20-OCT-1992; 92US-00964536.

XX PR 16-JUN-1994; 94US-00261354.

XX PR 31-OCT-1996; 96US-0030173P.

XX PA (DOWC ) DOW CHEM CO.

XX PI Mezes PS, Richard RA, Johnson KS, Schlom J, Kashmiri SVS, Shu L;  
XX PI Padlan BA;

XX DR WPI; 2003-615251/58.

XX PT New composite and humanized anti-tumor-associated glycoprotein-72  
XX PT monoclonal antibody useful for detecting or treating cancer.

XX PS Example 6; Fig 32A; 130pp; English.

XX CC The invention relates to a humanised or composite anti-tumour-associated  
XX glycoprotein-72 (TAG-72) antibody or its fragment comprising a  
XX complementarity determining region (CDR)-grafted light chain having light  
XX chain CDRs of a murine anti-TAG-72 antibody grafted onto a human subgroup  
XX IV kappa light chain. The composition is suitable for the treatment and  
XX detection of cancer. The novel antibody has the ability to bind  
XX specifically to malignant cells and does not bind to normal cells. It  
XX greatly minimises or eliminates harmful hypersensitivity anti-mouse  
XX antibody (HAMA) responses. The relatively small size and human character  
XX of the composite Hum4V-L, V-H single chain antibodies accelerate whole  
XX body clearance thus reducing the waiting period after injection before  
XX surgery is initiated. The present sequence represents the amino acid  
XX sequence of the native CC49 light chain variable region.

XX SQ Sequence 113 AA;

Query Match 91.2%; Score 540; DB 6; Length 113;  
Best Local Similarity 90.3%; Pred. No. 6.7e-37;  
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

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Db	1	DI	V	M	S	O	P	S	S	L	P	S	V	G	E	K	V	T	L	S	C	K	S	O	S	L	I	Y	S	G	N	K	N	I	L	A	W	Y	Q	R	F	G	S	P	K	L	I	I	W	A	S	A	R	60
Qy	61	E	S	G	V	P	R	F	S	G	S	G	T	F	T	L	I	S	S	V	Q	A	E	D	V	A	V	Y	Y	Q	O	Y	Y	S	P	L	T	F	G	A	G	T	K	L	E	U	K	113						
Db	61	E	S	G	V	P	R	F	T	S	G	S	G	T	F	T	L	I	S	S	V	K	E	D	L	A	V	Y	Y	Q	O	Y	Y	S	P	L	T	F	G	A	G	T	K	L	E	U	K	113						

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Job time : 122.969 secs

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		:           :           :	
<b>pB</b>	61	ESGVPDRFSGSGGTDFLTLSISKVEDLAVYCOQYYSPLTFGACTKLVLK	113

RESULT 25	
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ID	ABU62757 standard; protein; 113 AA.
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XX	ABU62757;
XX	
XX	
DT	08-SEP-2003 (first entry)
XX	
DE	Murine monoclonal antibody CC49 variable light chain.
XX	
XX	Mouse; monoclonal antibody; CC49; variable kappa chain; cytostatic;
KW	vaccine; humanised antibody; tumour-associated glycoprotein 72; TAG-72;
KW	cancer; tumour.
XX	
OS	Mus musculus.
XX	
FN	US2003004318-A1.
XX	
PD	02-JAN-2003.
XX	
PF	31-OCT-2001; 2001US-00998817.
XX	
PR	31-OCT-1996; 96US-0030173P.
PR	30-OCT-1997; 97WO-US019641.
PR	18-FEB-1998; 98US-00025203.
XX	
PA	(ANDE//) ANDERSON W H K.
PA	(TEMP//) TEMPEST P R.
PA	(CARR//) CARR F J.
PA	(HARR//) HARRIS W J.
PA	(ARMO//) ARMOUR K.
XX	
PI	Anderson WHK, Tempest PR, Carr FJ, Harris WJ, Armour K;
DR	WPI: 2003-491945/46.

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xx
SQ Sequence 113 AA;

Query Match          91.2%; Score 540; DB 6; Length 113;
Best Local Similarity 90.3%; Pred. No. 6.7e-37;
Matches 102; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

Qy 1 DIVMSQSPDSLVLASIGERVTLLNCKSSOSLLYSGNQNYLAWYQKQSPKLLIYWASAR 60
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 1 DIVMSQSPSSLVPVSGEKVTLLNCKSSOSLLYSGNQNYLAWYQKQSPKLLIYWASAR 60

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GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: July 25, 2005, 07:36:04 ; Search time 112.009 Seconds  
(without alignments)  
-521-183 Million cell updates/sec

Title: US-10-058-069-9\_COPY\_21\_134

Perfect score: 592

Sequence: 1 DIVMSQSPDSLAISLGERVT.....QQYYSPLTFGAGTKLELKR 114

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database :

1: uniprot\_sprot.\*

2: uniprot\_trembl.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	532	89.9	114	1 KV4A HUMAN	P01625 homo sapien
2	526	88.9	134	1 KV4C HUMAN	P06314 homo sapien
3	512.5	86.6	133	1 KV4B HUMAN	P06313 homo sapien
4	492	83.1	255	2 Q6KB05	Q6KB05 mus musculus
5	484	81.8	121	1 KV4O HUMAN	P06312 homo sapien
6	479	80.9	109	1 KV4D HUMAN	P83593 homo sapien
7	418	70.6	114	1 KV1A MOUSE	P01632 mus musculus
8	405.5	68.5	109	2 Q9UL78	Q9UL78 homo sapien
9	400	67.6	108	2 Q9UL79	Q9UL79 homo sapien
10	398	67.2	111	1 KV3N MOUSE	P01666 mus musculus
11	397	67.1	108	1 KV1M HUMAN	P01605 homo sapien
12	397	67.1	108	2 Q9UL70	Q9UL70 homo sapien
13	395.5	66.8	109	1 KV3D HUMAN	P01622 homo sapien
14	395.5	66.8	129	1 KV3L HUMAN	P18135 homo sapien
15	395	66.7	149	1 KV5A MOUSE	P01633 mus musculus
16	394	66.6	240	2 Q6PIH6	Q6PIH6 homo sapien
17	393	66.4	136	1 KV5B MOUSE	P01634 mus musculus
18	393	66.4	241	2 Q63ZX4	Q63ZX4 mus musculus
19	392.5	66.3	129	1 KV3M HUMAN	P18136 homo sapien
20	392	66.2	236	2 Q723Y4	Q723Y4 homo sapien
21	391.5	66.1	109	1 KV3B HUMAN	P01620 homo sapien
22	391	66.0	111	1 KV3U MOUSE	P01673 mus musculus
23	390	65.9	244	2 Q65ZC8	Q65ZC8 homo sapien
24	389	65.7	111	1 KV3M MOUSE	P01665 mus musculus
25	389	65.7	236	2 Q6GMX8	Q6GMX8 homo sapien
26	388.5	65.6	109	1 KV3F HUMAN	P01624 homo sapien
27	388	65.5	111	1 KV3L MOUSE	P01664 mus musculus
28	388	65.5	111	1 KV3O MOUSE	P01667 mus musculus
29	387	65.4	108	1 KV1Y HUMAN	P80362 homo sapien
30	386.5	65.3	107	2 Q96SA9	Q96SA9 homo sapien
31	386.5	65.3	235	2 Q6GMV9	Q6GMV9 homo sapien

ALIGNMENTS

32	385.5	65.1	109	1 KV3E HUMAN	P01623 homo sapien
33	385	65.0	108	2 Q9UL83	Q9UL83 mus musculus
34	384	64.9	111	1 KV3S MOUSE	P01671 mus musculus
35	384	64.9	115	1 KV2A HUMAN	P01614 homo sapien
36	384	64.9	234	2 Q72473	Q72473 mus musculus
37	384	64.9	240	2 Q65ZC9	Q65ZC9 mus musculus
38	383.5	64.8	109	2 Q9UL85	Q9UL85 mus musculus
39	383.5	64.8	239	2 Q8NEK0	Q8NEK0 mus musculus
40	383	64.7	108	2 Q9UL77	Q9UL77 mus musculus
41	383	64.7	236	2 Q6PIL8	Q6PIL8 mus musculus
42	382.5	64.6	108	1 KV3A HUMAN	P01619 homo sapien
43	382	64.5	236	2 Q6GMX9	Q6GMX9 mus musculus
44	381	64.4	129	1 KV1W HUMAN	P04431 homo sapien
45	381	64.4	236	2 Q6GMW1	Q6GMW1 mus musculus
46	380.5	64.3	107	2 Q9UL81	Q9UL81 mus musculus
47	380	64.2	108	1 KV1V HUMAN	P04430 mus musculus
48	380	64.2	111	1 KV3Q MOUSE	P01669 mus musculus
49	379.5	64.1	109	1 KV3G HUMAN	P04206 homo sapien
50	379.5	64.1	117	1 KV2E HUMAN	P06309 homo sapien
51	379	64.0	108	1 KV1K HUMAN	P01603 homo sapien
52	379	64.0	111	1 KV3K MOUSE	P01663 mus musculus
53	379	64.0	236	2 Q6GMX0	Q6GMX0 mus musculus
54	377.5	63.8	110	1 KV3P MOUSE	P01668 mus musculus
55	377.5	63.8	113	1 KV2D HUMAN	P01617 homo sapien
56	377.5	63.8	129	1 KV3H HUMAN	P04207 homo sapien
57	377.5	63.8	239	2 Q8TCD0	Q8TCD0 mus musculus
58	377	63.7	108	1 KV1H HUMAN	P01600 homo sapien
59	376.5	63.6	113	1 KV2B HUMAN	P01615 homo sapien
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61	376.5	63.6	235	2 Q6GMW0	Q6GMW0 mus musculus
62	376	63.5	111	1 KV3H MOUSE	P01660 mus musculus
63	375.5	63.4	248	2 Q65ZQ7	Q65ZQ7 mus sp. b3
64	375	63.3	108	2 Q8VIJ0	Q8VIJ0 mus musculus
65	374.5	63.3	113	1 KV2G MOUSE	P01631 mus musculus
66	374	63.2	108	1 KV1O HUMAN	P01607 mus musculus
67	374	63.2	128	1 KV5E MOUSE	P01637 mus musculus
68	374	63.2	236	2 Q6PIT5	Q6PIT5 mus musculus
69	373	63.0	111	2 Q920E9	Q920E9 mus musculus
70	372.5	62.9	219	2 Q65ZC0	Q65ZC0 mus musculus
71	372	62.8	108	1 KV1P HUMAN	P01608 mus musculus
72	372	62.8	111	1 KV3R MOUSE	P01670 mus musculus
73	371	62.7	108	1 KV1R HUMAN	P01610 homo sapien
74	371	62.7	111	2 Q81IU6	Q81IU6 mus musculus
75	371	62.7	236	2 Q6PIH7	Q6PIH7 mus musculus
76	371	62.7	238	2 Q66JS7	Q66JS7 mus musculus
77	370.5	62.6	113	1 KV2C MOUSE	P01628 mus musculus
78	370	62.5	112	1 KV3G MOUSE	P01659 mus musculus
79	370	62.5	236	2 Q6P5S8	Q6P5S8 mus musculus
80	369.5	62.4	109	2 Q9UL86	Q9UL86 mus musculus
81	369	62.3	99	2 Q9UL74	Q9UL74 mus musculus
82	368	62.2	108	1 KV1B HUMAN	P01594 homo sapien
83	368	62.2	108	1 KV1L HUMAN	P01604 homo sapien
84	368	62.2	108	1 KV1S HUMAN	P01611 homo sapien
85	368	62.2	111	1 KV3J MOUSE	P01662 mus musculus
86	367	62.0	131	1 KV3I MOUSE	P01661 mus musculus
87	366	61.8	108	1 KV3V MOUSE	P01674 mus musculus
88	366	61.8	262	2 Q65Z11	Q65Z11 mus musculus
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90	364	61.5	112	1 KV1U HUMAN	P01613 homo sapien
91	363	61.3	128	1 KV1K HUMAN	P06311 homo sapien
92	363	61.3	132	1 KV3F MOUSE	P01558 mus musculus
93	361.5	61.1	112	2 Q6LEM8	Q6LEM8 mus musculus
94	361.5	61.1	114	2 Q8XIF1	Q8XIF1 mus musculus
95	361.5	61.1	243	2 Q6NTU5	Q6NTU5 xenopus lae
96	361	61.0	108	1 KV1C HUMAN	P01595 homo sapien
97	361	61.0	108	1 KV1E HUMAN	P01597 homo sapien
98	361	61.0	108	1 KV1G HUMAN	P01599 homo sapien
99	361	61.0	108	1 KV1Q HUMAN	P01609 homo sapien
100	361	61.0	111	1 KV3T MOUSE	P01672 mus musculus

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RESULT 1
KV4A_HUMAN STANDARD; PRT; 114 AA.
AC P01625;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 25-OCT-2004 (Rel. 45, Last annotation update)
DE IG kappa chain V-IV region Len.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE.
RX MEDLINE=76004342; PubMed=50995;
RA Schneider M., Hillebrand N.;
RT "The primary structure of a monoclonic immunoglobulin-L-chain of
RL subgroup IV of the kappa type (Bence-Jones protein Len).";
RN Hoppe-Seyler's Z. Physiol. Chem. 356:507-557(1975).
RP REVISION TO 9.
RA Salomon A.;
RL Submitted (AUG-1996) to Swiss-Prot.
CC -I- MISCELLANEOUS: The C region of this chain has the INV (3) marker.
DR PDB; 1BEQ; X-ray; A/B=1-114.
DR PDB; 1EEU; X-ray; A/B=1-114.
DR PDB; 1EFQ; X-ray; A=1-114.
DR PDB; 1EK3; X-ray; A/B=1-114.
DR PDB; 1LVE; X-ray; @=1-114.
DR PDB; 3LVE; X-ray; @=1-114.
DR PDB; 5LVE; X-ray; A=1-114.
DR GO; GO:0005576; C:extracellular; NAS.
DR GO; GO:0003823; F:antigen binding; NAS.
DR GO; GO:0006955; P:immune response; NAS.
DR InterPro; IPR007110; IG-like.
DR Pfam; PF00047; IG_1.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS50835; IG LIKE; 1.
KW 3D-structure; Bence-Jones protein; Direct protein sequencing;
Immunoglobulin V region.
FT DOMAIN 1 23
FT DOMAIN 24 40
FT DOMAIN 41 55
FT DOMAIN 56 62
FT DOMAIN 63 94
FT DOMAIN 95 101
FT DOMAIN 102 113
FT DISULFID 23 94
FT STRAND 4 7
FT STRAND 10 13
FT STRAND 15 16
FT STRAND 19 25
FT STRAND 30 31
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FT STRAND 51 55
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FT STRAND 76 81
FT HELIX 86 88
FT STRAND 90 96
FT STRAND 103 104
FT STRAND 108 112
FT NON_TER 114 114

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DQ 61 ESVGVPDRFSGSGSGTDFTLTITSSVQAEDVAVYVYCOQYYSYPLTFTGAGTKLEIKR 114

RESULT 2
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AC P08314;
DT 01-JAN-1988 (Rel. 06, Created)
DT 01-APR-1988 (Rel. 07, Last sequence update)
DT 15-JUL-1999 (Rel. 38, Last annotation update)
DE IG kappa chain V-IV region B17 precursor.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86041854; PubMed=2997713;
RA Marsh P., Mills F., Gould H.;
RT "Detection of a unique human V kappa IV germline gene by a cloned cDNA
RL probe.";
RN Nucleic Acids Res. 13:6531-6544(1985).
RP REVISION TO 76.
RA Marsh P.;
RL Submitted (OCT-1986) to the EMBL/GenBank/DBJ databases.
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CC or send an email to license@isb-sib.ch).
DR EMBL; X02990; CAA26733.1; -.
DR HSP; P01625; ILVE.
DR GO; GO:0005576; C:extracellular; NAS.
DR GO; GO:0003823; F:antigen binding; NAS.
DR GO; GO:0006955; P:immune response; NAS.
DR InterPro; IPR007110; IG-like.
DR InterPro; IPR003596; IG_V.
DR Pfam; PF00047; IG_1.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS50835; IG LIKE; 1.
KW Immunoglobulin V region; Signal.
FT SIGNAL 1 20
FT CHAIN 21 134
FT DOMAIN 21 43
FT DOMAIN 44 60
FT DOMAIN 61 75
FT DOMAIN 76 82
FT DOMAIN 83 114
FT DOMAIN 115 121
FT DOMAIN 122 133
FT DISULFID 43 114
FT NON_TER 134 134
SQ SEQUENCE 134 AA; 14966 MW; 6413A22FD0738832 CRC64;
Query Match 88.9%; Score 526; DB 1; Length 134;
Best Local Similarity 86.0%; Pred. No. 8.3e-47;
```

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Matches 98; Conservative 8; Mismatches 8; Indels 0; Gaps 0;
QY 1 DIVMSQPSLAVSLGERTVLTNCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYWASAR 60
DB 21 DIVMTQSPDSLAVSLGERATINCKSSQSLYSNDKNYLAAYQKPGQSPKLLIYWASTR 80
QY 61 ESGVDPFRFSGSGTDFTLTISVQAEADVAVYCOQYYSYPLTFGAGTKLELKR 114
DB 81 ESGVDPFRFSGSGTDFTLTISVQAEADVAVYCOQYYSYPLTFGAGTKVEIKR 134

RESULT 3
KV40_HUMAN STANDARD; PRT; 133 AA.
ID Q64B_HUMAN
AC P06313;
DT 01-JAN-1988 (Rel. 06, Created)
DT 01-JAN-1988 (Rel. 06, Last sequence update)
DT 15-JUL-1999 (Rel. 38, Last annotation update)
DE Ig kappa chain V-IV region JI precursor.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86041853; PubMed=2997712;
RA Klobeck H.G., Bornkamm G.W., Combriato G., Mocikat R., Pohlenz H.D.,
RA Zachau H.G.;
RT "Subgroup IV of human immunoglobulin K light chains is encoded by a
RT single germline gene.";
RL Nucleic Acids Res. 13:6515-6529(1985).
CC -----
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CC -----
DB EMBL; 200022; CAA77317.1; -
DB PIR; A01904; K4HUJI.
DB HSP; P01625; ILVE.
DB GO; GO:0005576; C:extracellular; NAS.
DB GO; GO:0003823; P:antigen binding; NAS.
DB GO; GO:0006955; P:immune response; NAS.
DB InterPro; IPR007110; Ig-like.
DB InterPro; IPR003596; Ig_v.
DB Pfam; PF00047; ig; 1.
DB SMART; SM00406; IGV; 1.
DB PROSITE; PS50835; IG_LIKE; 1.
KW Immunoglobulin V region; Signal.
FT SIGNAL 1 20
FT CHAIN 21 133 Ig kappa chain V-IV region JI.
FT DOMAIN 21 43 Framework-1.
FT DOMAIN 44 60 Complementarity-determining-1.
FT DOMAIN 61 75 Framework-2.
FT DOMAIN 76 82 Complementarity-determining-2.
FT DOMAIN 83 114 Framework-3.
FT DOMAIN 115 122 Complementarity-determining-3.
FT DOMAIN 123 132 Framework-4.
FT DISULFID 43 114 By similarity.
FT NON_TER 133 133
SQ SEQUENCE 133 AA; 14632 MW; 5FB3953066744AF4 CRC64;

Query Match 86.6%; Score 512.5; DB 1; Length 133;
Best Local Similarity 86.0%; Pred. NO. 2.1e-45;
Matches 98; Conservative 7; Mismatches 8; Indels 1; Gaps 1;
QY 1 DIVMSQPSLAVSLGERTVLTNCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYWASAR 60
DB 21 DIVMTQSPDSLAVSLGERATINCKSSQSLYSNDKNYLAAYQKPGQSPKLLIYWASTR 80
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QY 61 ESGVDPFRFSGSGTDFTLTISVQAEADVAVYCOQYYSYPLTFGAGTKLELKR 114
DB 81 ESGVDPFRFSGSGTDFTLTISVQAEADVAVYCOQYYSYPLTFGAGTKVEIKR 133

RESULT 4
Q6KB05 PRELIMINARY; PRT; 255 AA.
ID Q6KB05;
AC Q6KB05;
DT 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE ScFv B8E5 protein (Fragment).
GN Name=scFv B8E5;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Balb/c;
RA Peter J.C., Wallukat G., Tugler J., Maurice D., Roegel J.C.,
RA Briand J.P., Hoebeke J.;
RL Submitted (JUN-2004) to the EMBL/GenBank/DBJ databases.
DR EMBL; AJ746180; CAG34081.1; -
DR HSP; P01837; IKCR.
DR InterPro; IPR003599; Ig.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003596; Ig_v.
DR SMART; SM00409; IG; 2.
DR SMART; SM00406; IGV; 2.
DR PROSITE; PS50835; IG_LIKE; 2.
FT NON_TER 1 1
SQ SEQUENCE 255 AA; 27445 MW; B68BD38395DF713B CRC64;

Query Match 83.1%; Score 492; DB 2; Length 255;
Best Local Similarity 84.1%; Pred. NO. 6e-43;
Matches 95; Conservative 9; Mismatches 9; Indels 0; Gaps 0;
QY 1 DIVMSQPSLAVSLGERTVLTNCKSSQSLYSNGKNYLAAYQKPGQSPKLLIYWASAR 60
DB 137 DIVMAQSPSSLVSAGKIVNSCKSSQSLLSNRKNYLAAYQKPGQSPKLLIYGASTR 196
QY 61 ESGVDPFRFSGSGTDFTLTISVQAEADVAVYCOQYYSYPLTFGAGTKLELKR 113
DB 197 ESGVDPFRFSGSGTDFTLTISVQAEADVAVYCOQYYSYPLTFGAGTKLEIKR 249

RESULT 5
KV40_HUMAN STANDARD; PRT; 121 AA.
ID KV40_HUMAN
AC P06312;
DT 01-JAN-1988 (Rel. 06, Created)
DT 01-JAN-1988 (Rel. 06, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Ig kappa chain V-IV region precursor (Fragment).
GN Name=IGKV4-1;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86041853; PubMed=2997712;
RA Klobeck H.G., Bornkamm G.W., Combriato G., Mocikat R., Pohlenz H.D.,
RA Zachau H.G.;
RT "Subgroup IV of human immunoglobulin K light chains is encoded by a
RT single germline gene.";
RL Nucleic Acids Res. 13:6515-6529(1985).
CC -1- MISCELLANEOUS: There is only one Ig kappa V-IV gene.
CC -----
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DR EMBL; Z00023; CA77318.1; -.  
DR PIR; A01902; K4HU.  
DR HSSP; P01625; ILVE.  
DR Genew; HGNC:5834; IGKV4-1.  
DR GO; GO:0005576; C:extracellular; NAS.  
DR GO; GO:0003823; F:antigen binding; NAS.  
DR GO; GO:0006955; P:immune response; NAS.  
DR InterPro; IPR007110; Ig-like.  
DR Pfam; PF00047; Ig; 1.  
DR SMART; SM00406; IGV; 1.  
DR PROSITE; PS50835; IG LIKE; 1.  
KW Immunoglobulin V region; Signal.  
FT SIGNAL 1 20  
FT CHAIN 21 >121 Ig kappa chain V-IV region.  
FT DOMAIN 21 43 Framework-1.  
FT DOMAIN 44 60 Complementarity-determining-1.  
FT DOMAIN 61 75 Framework-2.  
FT DOMAIN 76 82 Complementarity-determining-2.  
FT DOMAIN 83 114 Complementarity-determining-3.  
FT DOMAIN 115 121 Complementarity-determining-3.  
FT DISULFID 43 114 By similarity.  
FT NON TER 121 121  
SQ SEQUENCE 121 AA; 13380 MW; 9586AD4188D33974 CRC64;

Query Match 81.8%; Score 484; DB 1; Length 121;  
Best Local Similarity 90.1%; Pred. No. 1.8e-42;  
Matches 91; Conservative 4; Mismatches 6; Indels 0; Gaps 0;  
  
QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSNGKNYLAHYQKPGQPKLLIYWASAR 60  
DB 21 DIVMTQSPDSLAVSLGERATINCRSSQSVLYSSNNKNYLAHYQKPGQPKLLIYWASTR 80  
  
QY 61 ESGVPDRFSGSGGTDFLTITSSVQAEADVAVVYCOQYYSYP 101  
DB 81 ESGVPDRFSGSGGTDFLTITSSVQAEADVAVVYCOQYYSYP 121

RESULT 6  
KV4D HUMAN  
ID\_KV4D HUMAN STANDARD; PRT; 109 AA.  
AC P83593;  
DT 10-OCT-2003 (Rel. 42, Created)  
DT 10-OCT-2003 (Rel. 42, Last sequence update)  
DE 05-JUL-2004 (Rel. 44, Last annotation update)  
DE Ig kappa chain V-IV region STH (Fragment).  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP SEQUENCE.  
RC TISSUE=Abdominal adipose tissue;  
RX MEDLINE=98249779; PubMed=9588180; DOI=10.1006/hbrc.1998.8515;  
RT Olsen K.E., Sletten K., Westermarck P.;  
RT "Extended analysis of Al-amyloid protein from abdominal wall  
RT subcutaneous fat biopsy: kappa IV immunoglobulin light chain.";  
RL Biochem. Biophys. Res. Commun. 245:713-716(1998).  
CC -!- FUNCTION: May play an important role in fibrillogenesis.  
DR InterPro; IPR007110; Ig-like.  
DR InterPro; IPR003596; IGV.  
DR Pfam; PF00047; Ig; 1.  
DR SMART; SM00406; IGV; 1.  
DR PROSITE; PS50835; IG LIKE; 1.  
KW Direct protein sequencing; Immunoglobulin V region.  
FT DOMAIN 1 23 Framework-1.  
FT DOMAIN 24 40 Complementarity-determining-1.

FT DOMAIN 41 55 Framework-2.  
FT DOMAIN 56 62 Complementarity-determining-2.  
FT DOMAIN 63 94 Framework-3.  
FT DOMAIN 95 101 Complementarity-determining-3.  
FT DOMAIN 102 109 Framework-4.  
FT DISULFID 23 94 By similarity.  
FT UNSURE 23 23  
FT UNSURE 94 94  
FT NON TER 109 109  
SQ SEQUENCE 109 AA; 12060 MW; 0C4F31EA11E12A0B CRC64;  
  
Query Match 80.9%; Score 479; DB 1; Length 109;  
Best Local Similarity 81.7%; Pred. No. 5.2e-42;  
Matches 89; Conservative 6; Mismatches 14; Indels 0; Gaps 0;  
  
QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLYSNGKNYLAHYQKPGQPKLLIYWASAR 60  
DB 1 DIVMTQSPDSLAVSLGERATINCRSSQSVLYSSNNKNYLAHYQKPGQPKLLIYWASTR 60  
  
QY 61 ESGVPDRFSGSGGTDFLTITSSVQAEADVAVVYCOQYYSYP 109  
DB 61 ESGVPDRFSGSGGTDFLTITSSVQAEADVAVVYCOQYYSYP 109

RESULT 7  
KVIA MOUSE  
ID\_KVIA MOUSE STANDARD; PRT; 114 AA.  
AC P01632;  
DT 21-JUL-1986 (Rel. 01, Created)  
DT 21-JUL-1986 (Rel. 01, Last sequence update)  
DT 25-OCT-2004 (Rel. 45, Last annotation update)  
DE Ig kappa chain V-I region S107A.  
OS Mus musculus (Mouse).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.  
OX NCBI\_TaxID=10090;  
RN [1]  
RP SEQUENCE FROM N.A.  
RX MEDLINE=81241357; PubMed=6788890;  
RA Kwan S.-P., Rudikoff S., Seidman J.G., Leder P., Scharff M.D.;  
RT "Nucleic acid and protein sequences of phosphocholine-binding light  
RT chains.";  
RL J. Exp. Med. 153:1366-1370(1981).  
CC -!- FUNCTION: Anti-phosphocholine antibody.  
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CC EMBL; U29423; AAC00033.1; -.  
DR PIR; A01915; KYMS7A.  
DR HSSP; Q9ERZ9; 2AP2.  
DR InterPro; IPR007110; Ig-like.  
DR InterPro; IPR003596; IGV.  
DR Pfam; PF00047; Ig; 1.  
DR SMART; SM00406; IGV; 1.  
DR PROSITE; PS50835; IG LIKE; 1.  
KW Immunoglobulin V region.  
FT DOMAIN 1 23  
FT DOMAIN 24 40 Complementarity-determining-1.  
FT DOMAIN 41 55 Framework-2.  
FT DOMAIN 56 62 Complementarity-determining-2.  
FT DOMAIN 63 94 Framework-3.  
FT DOMAIN 95 103 Complementarity-determining-3.  
FT DOMAIN 104 113 Complementarity-determining-3.  
FT DISULFID 23 94 By similarity.  
FT NON TER 114 114  
SQ SEQUENCE 114 AA; 12717 MW; 32008EC8E9DBE67B CRC64;

[illegible]

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DR PIR; B01937; KWS83.
DR HSSP; P01665; 1QNZ.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; Ig; 1.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS00835; IG_LIKE; 1.
KW Direct protein sequencing; Immunoglobulin V region.
FT DOMAIN 1 23 Framework-1.
FT DOMAIN 24 38 Complementarity-determining-1.
FT DOMAIN 39 53 Framework-2.
FT DOMAIN 54 60 Complementarity-determining-2.
FT DOMAIN 61 92 Framework-3.
FT DOMAIN 93 101 Complementarity-determining-3.
FT DOMAIN 102 111 Framework-4.
FT DISULFID 23 92 By similarity.
FT NON_TER 111 111
SQ SEQUENCE 111 AA; 11952 MW; 2058BB50CE306D31 CRC64;

Query Match 67.2%; Score 398; DB 1; Length 111;
Best Local Similarity 69.9%; Pred. No. 1.4e-33;
Matches 79; Conservative 12; Mismatches 20; Indels 2; Gaps 1;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
Db 1 DIVLTQSPASLAVSLGQRATISCKASQSDVDGD--SYNNYQKPGQPPKLLIYAASNL 58

Qy 61 ESGVPDRFSGSGGTDFLTITSSVQAEADVAVYQYQYYSYPLTFGAGTKLEK 113
Db 59 ESGTPARFSGSGGTDFLTINHPVEEADAAAYYCCQSNEDPLTFGAGTKLEK 111

RESULT 11
KV1M HUMAN STANDARD; PRT; 108 AA.
ID KV1M HUMAN STANDARD; PRT; 108 AA.
AC P01605;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Ig kappa chain V-I region Lay.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE.
RX MEDLINE=77038198; PubMed=824717;
RA Capra J.D., Klapper D.G.;
RT "Complete amino acid sequence of the variable domains of two human Igm
anti-gamma globulins (Lay/Pom) with shared idiotypic specificities.";
RL Scand. J. Immunol. 5:677-684(1976).
CC -!- MISCELLANEOUS: The second and third hypervariable regions of this
chain are identical with those of the human POM V-III kappa chain,
with which it shares certain idiotypic determinants.
CC -!- MISCELLANEOUS: This chain was isolated from an Igm with anti-gamma
globulin activity.
DR PIR; A01871; KIHULY.
DR HSSP; P01607; 1BWV.
DR GO; GO:0005576; C:extracellular; NAS.
DR GO; GO:0003823; F:antigen binding; NAS.
DR GO; GO:0006955; P:immune response; NAS.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; Ig; 1.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS00835; IG_LIKE; 1.
KW Direct protein sequencing; Immunoglobulin V region.
FT DOMAIN 1 23 Framework-1.
FT DOMAIN 24 34 Complementarity-determining-1.
FT DOMAIN 35 49 Framework-2.
FT DOMAIN 50 56 Complementarity-determining-2.
FT DOMAIN 57 88 Framework-3.
FT DOMAIN 89 97 Complementarity-determining-3.
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FT DOMAIN 98 107 Framework-4.
FT DISULFID 23 88 By similarity.
FT NON_TER 108 108
SQ SEQUENCE 108 AA; 11834 MW; 739993A95431434A CRC64;

Query Match 67.1%; Score 397; DB 1; Length 108;
Best Local Similarity 66.7%; Pred. No. 1.8e-33;
Matches 76; Conservative 15; Mismatches 17; Indels 6; Gaps 1;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
Db 1 DIQMTQSPSSLSVSGDRVTITCQASQ-----NVNAYLNWYQKPGKPLKLLIYGASTR 54

Qy 61 ESGVPDRFSGSGGTDFLTITSSVQAEADVAVYQYQYYSYPLTFGAGTKLEK 114
Db 55 EAGVPSRFSGSGGTDFLTITSSLPQEDIATYYCQYNNWPPTEFGQGTKEVKR 108

RESULT 12
Q9UL70 PRELIMINARY; PRT; 108 AA.
ID Q9UL70 PRELIMINARY; PRT; 108 AA.
AC Q9UL70;
DT 01-MAY-2000 (TrEMBLrel. 13, Created)
DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Myosin-reactive immunoglobulin light chain variable region
DE (Fragment).
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=98277139; PubMed=9614934; DOI=10.1006/clim.1998.4531;
RA Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA Young D.C.;
RT "Myosin-reactive autoantibodies in rheumatic carditis and normal
fetus.";
RL Clin. Immunol. Immunopathol. 87:184-192 (1998).
DR EMBL; AF035044; AAD56280.1; -.
DR PIR; P08663; PH0863.
DR HSSP; P01607; 1BWV.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003596; Ig_v.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS00835; IG_LIKE; 1.
FT NON_TER 1 1
FT NON_TER 108 108
SQ SEQUENCE 108 AA; 11633 MW; B7BEDC3E41FCCA37 CRC64;

Query Match 67.1%; Score 397; DB 2; Length 108;
Best Local Similarity 67.5%; Pred. No. 1.8e-33;
Matches 77; Conservative 13; Mismatches 18; Indels 6; Gaps 1;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKNYLAWYQKPGQSPKLLIYWASAR 60
Db 1 DIQMTQSPSSLSVSGDRVTITCQASQCI-----SNLYAWYQKPGKPKSLIYAASLT 54

Qy 61 ESGVPDRFSGSGGTDFLTITSSVQAEADVAVYQYQYYSYPLTFGAGTKLEK 114
Db 55 QSGVPSRFSGSGGTDFLTITSSLPQEDIATYYCQYNNWPPTEFGQGTKEIKR 108

RESULT 13
KV3D HUMAN STANDARD; PRT; 109 AA.
ID KV3D HUMAN STANDARD; PRT; 109 AA.
AC P01622;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Ig kappa chain V-III region TI.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
```



OC Mammalia; Euthera; Primates; Catarrhini; Homiidae; Homo.  
 OX NCBI\_TaxID=9606;  
 RN [1]  
 RP SEQUENCE.  
 RX MEDLINE=72188439; PubMed=5027703;  
 RA Suter L., Barnikol H.U., Watanabe S., Hilschmann N.;  
 RT "Rule of antibody structure. The primary structure of a monoclonal  
 immunoglobulin L-chain of kappa-type, subgroup 3 (hence-Jones protein  
 Ti). IV. The complete amino acid sequence and its significance for the  
 mechanism of antibody production.";  
 RT Hoppe-Seyler's Z. Physiol. Chem. 353:189-208(1972).  
 RL -I- MISCELLANEOUS: The C region of this chain has the INV (3) marker.  
 CC -I- MISCELLANEOUS: This is a Bence-Jones protein.  
 DR PIR; A01895; K3HUT1.  
 DR HSP; P01625; L1VE.  
 DR GO; GO:0005576; C:extracellular; NAS.  
 DR GO; GO:0003823; P:antigen binding; NAS.  
 DR GO; GO:0006955; P:immune response; NAS.  
 DR InterPro; IPR007110; IG-like.  
 DR InterPro; IPR003596; IG\_v.  
 DR Pfam; PF00047; IG\_v.  
 DR SMART; SM00406; IGV; 1.  
 DR PROSITE; PS50835; IG\_LIKE; 1.  
 KW Bence-Jones protein; Direct protein sequencing;  
 Immunoglobulin V region.  
 FT DISULFID 23 89 By similarity.  
 FT NON\_TER 109 109  
 SQ SEQUENCE 109 AA; 11788 MW; 8C35058CDC7749BC CRC64;  
 Query Match 66.8%; Score 395.5; DB 1; Length 109;  
 Best Local Similarity 65.8%; Pred. No. 2.6e-33;  
 Matches 75; Conservative 20; Mismatches 14; Indels 5; Gaps 1;  
 QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQLLYSGNQKNYLAWYQKPGSPKLLIYWASAR 60  
 Db EIVLTQSPGTLSPGERATLSCRASQSV-----SSSYLAWYQKPGQAPRLLIYASR 55  
 QY 61 ESGVDPFRSGSGGTDFLTITSSVQAEVAVVYCOOYYSYPLTFGAGTKLELKR 114  
 Db 56 ATGIPDRFSGSGGTDFLTITSLRLEPDAFVYCOOYYSYPLTFGAGTKLELKR 109  
 RESULT 14  
 KV3L HUMAN  
 ID KV3L HUMAN STANDARD; PRT; 129 AA.  
 AC P18135;  
 DT 01-NOV-1990 (Rel. 16, Created)  
 DT 01-NOV-1990 (Rel. 16, Last sequence update)  
 DT 15-JUL-1999 (Rel. 38, Last annotation update)  
 DE Ig kappa chain V-III region HAH precursor.  
 OS Homo sapiens (Human)  
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;  
 OC Mammalia; Euthera; Primates; Catarrhini; Homiidae; Homo.  
 OX NCBI\_TaxID=9606;  
 RN [1]  
 RP SEQUENCE FROM N.A.  
 RX MEDLINE=88171307; PubMed=3127527;  
 RA Kipps T.J., Tomhave B., Chen P.P., Carson D.A.;  
 RT "Autoantibody-associated kappa light chain variable region gene  
 expressed in chronic lymphocytic leukemia with little or no somatic  
 mutation. Implications for etiology and immunotherapy.";  
 RL J. Exp. Med. 167:840-852(1988).  
 CC -I- DISBAS: The protein is one of the surface immunoglobulin M  
 autoantibodies expressed in patients with chronic lymphocytic  
 leukemia.  
 DR PIR; P10022; K3HUT1.  
 DR HSP; P01625; L1VE.  
 DR GO; GO:0005576; C:extracellular; NAS.  
 DR GO; GO:0003823; P:antigen binding; NAS.  
 DR GO; GO:0006955; P:immune response; NAS.  
 DR InterPro; IPR007110; IG-like.  
 DR InterPro; IPR003596; IG\_v.  
 DR Pfam; PF00047; IG; 1.  
 DR SMART; SM00406; IGV; 1.  
 DR PROSITE; PS50835; IG\_LIKE; 1.  
 KW Bence-Jones protein; Direct protein sequencing;  
 Immunoglobulin V region.  
 FT DISULFID 23 89 By similarity.  
 FT NON\_TER 109 109  
 SQ SEQUENCE 109 AA; 11788 MW; 8C35058CDC7749BC CRC64;  
 Query Match 66.8%; Score 395.5; DB 1; Length 129;  
 Best Local Similarity 64.9%; Pred. No. 3.1e-33;  
 Matches 74; Conservative 21; Mismatches 14; Indels 5; Gaps 1;  
 QY 1 DIVMSQSPDSLAVSLGERVTLNCKSSQLLYSGNQKNYLAWYQKPGSPKLLIYWASAR 60  
 Db EIVLTQSPGTLSPGERATLSCRASQSV-----SSSYLAWYQKPGQAPRLLIYASR 75  
 QY 61 ESGVDPFRSGSGGTDFLTITSSVQAEVAVVYCOOYYSYPLTFGAGTKLELKR 114  
 Db 76 ATGIPDRFSGSGGTDFLTITSLRLEPDAFVYCOOYYSYPLTFGAGTKLELKR 129  
 RESULT 15  
 KV5A MOUSE  
 ID KV5A MOUSE STANDARD; PRT; 149 AA.  
 AC P01633;  
 DT 21-JUL-1986 (Rel. 01, Created)  
 DT 21-JUL-1986 (Rel. 01, Last sequence update)  
 DT 05-JUL-2004 (Rel. 44, Last annotation update)  
 DE Ig kappa chain V-V region MPC11 precursor.  
 OS Mus musculus (Mouse)  
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;  
 OC Mammalia; Euthera; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
 OX NCBI\_TaxID=10090;  
 RN [1]  
 RP SEQUENCE OF 1-71 FROM N.A.  
 RX MEDLINE=83001944; PubMed=6288267; DOI=10.1016/0092-8674(82)90184-2;  
 RA Kelley D.E., Coleclough C., Perry R.P.;  
 RT "Functional significance and evolutionary development of the 5'-  
 terminal regions of immunoglobulin variable-region genes.";  
 RL Cell 29:681-689(1982).  
 RN [2]  
 RP SEQUENCE OF 41-149 FROM N.A.  
 RX MEDLINE=80176554; PubMed=6245773;  
 RA Rabbitts T.H., Hamlyn P.H., Matthysens G., Roe B.A.;  
 RT "The variability, arrangement, and rearrangement of immunoglobulin  
 genes.";  
 RL Can. J. Biochem. 58:176-187(1980).  
 RN [3]  
 RP SEQUENCE OF 30-149.  
 RX MEDLINE=78186617; PubMed=418775;  
 RA Smith G.P.;  
 RT "Sequence of the full-length immunoglobulin kappa-chain of mouse  
 myeloma MPC 11.";  
 RL Biochem. J. 171:337-347(1978).  
 CC -I- MISCELLANEOUS: The mature chain has 12 additional residues at its  
 amino end, due to a tandem duplication of 36 nucleotides after the  
 codon for residue 36. Residue 42 corresponds to the amino-terminal  
 residue of typical kappa chains.  
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CC -----
DR EMBL; J00561; AAA38776.1; -.
DR PIR; A90823; KVM511.
DR HSSP; P01634; IIGC.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; Ig; 1.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS0835; IG LIKE; 1.
DR Direct protein sequencing; Immunoglobulin V region; Repeat; Signal.
FT SIGNAL 1 29
FT CHAIN 30 149
FT DOMAIN 42 64
FT DOMAIN 65 75
FT DOMAIN 76 90
FT DOMAIN 91 97
FT DOMAIN 98 129
FT DOMAIN 130 138
FT DOMAIN 139 148
FT REPEAT 26 35
FT REPEAT 38 47
FT NON TER 149 149
SQ SEQUENCE 149 AA; 16434 MW; B0480C87B682AC3E CRC64;

Query Match 66.7%; Score 395; DB 1; Length 149;
Best Local Similarity 67.5%; Pred. No. 4.1e-33;
Matches 77; Conservative 15; Mismatches 16; Indels 6; Gaps 1;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKYLAWYQKPGQSKPLLIYASAR 60
Db 42 DIVMTQSHKFMSTSVGDRVSTCKASQDV-----STTVAWYQKPGQSKPLLIYASAR 95
Qy 61 ESGVDPFRFSGSGGTDTLTITSSVQAEADVAVYCCQYYSYPLTFGAGTKLEIKR 114
Db 96 YTGVPDRFTGSGSGTDTFTTITSSVQAEADVAVYCCQHYSTPTPTFGGKTLEIKR 149

RESULT 16
Q6PIH6 PRELIMINARY; PRT; 240 AA.
ID KV5B_MOUSE STANDARD; PRT; 136 AA.
AC P01634;
DT 21-JUL-1986 (Rel. 01, Created)
DE Ig kappa chain V-V region MOPC 21 precursor.
DT 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DE Hypothetical protein.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=22389257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschuler S.F., Buetow K.H., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heide F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Vallalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bonifard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA Jones S.J., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
[2]
RN SEQUENCE FROM N.A.
RP TISSUE=Lung;
RA Strausberg R.;
RL Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; BC034142; AAH34142.1; -.
DR HSSP; P01837; IKB5.
DR InterPro; IPR003599; Ig.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003597; Ig cl.
DR InterPro; IPR003006; IG_MHC.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF07634; Cl-set; 1.
DR SMART; SM00409; IG; 2.
DR SMART; SM00407; IGV; 1.
DR SMART; SM00406; IGV; 1.
DR PROSITE; PS0835; IG LIKE; 2.
DR PROSITE; PS00290; IG_MHC; UNKNOWN_1.
KW Hypothetical protein.
SQ SEQUENCE 240 AA; 26234 MW; 188D4DD8BB781EC4 CRC64;

Query Match 66.6%; Score 394; DB 2; Length 240;
Best Local Similarity 69.6%; Pred. No. 9e-33;
Matches 80; Conservative 12; Mismatches 21; Indels 2; Gaps 2;

Qy 1 DIVMSQSPDSLAVSLGERVTLNCKSSQSLLYSGNQKYLAWYQKPGQSKPLLIYASAR 60
Db 21 DIVMAQSPLSLVTPGEPASISCRSSQSLHS-NGYNYFDWYQLKPGQSPQLLIYMGSR 79
Qy 61 ESGVDPFRFSGSGGTDTLTITSSVQAEADVAVYCCQYYSYPLTFGAGTKLEIKR 114
Db 80 ASGVDPFRFSGSGGTDTLTITSSVQAEADVAVYCCQYYSYPLTFGAGTKLEIKR 134

RESULT 17
KV5B_MOUSE STANDARD; PRT; 136 AA.
ID KV5B_MOUSE STANDARD; PRT; 136 AA.
AC P01634;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 25-OCT-2004 (Rel. 45, Last annotation update)
DE Ig kappa chain V-V region MOPC 21 precursor.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=82059477; PubMed=6170937;
RA Hamlyn P.H., Gait M.J., Milstein C.;
RT "Complete sequence of an immunoglobulin mRNA using specific priming
and the dideoxynucleotide method of RNA sequencing.";
RL Nucleic Acids Res. 9:4485-4494 (1981).
RN [2]
RP SEQUENCE OF 30-136.
RX MEDLINE=73053310; PubMed=4638343;
RA Svastik J., Milstein C.;
RT "The complete amino acid sequence of a mouse kappa light chain.";
RL Biochem. J. 128:427-444 (1972).
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entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
CC -----
DR EMBL; V00810; CAA24192.1; ALT_TERM.
DR PIR; A93736; KVM521.
DR PDB; 1IGG; X-ray; L=-.
DR InterPro; IPR007110; Ig-like.
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FT	DOMAIN	56	70	Framework-2.
FT	DOMAIN	71	77	Complementarity-determining-2.
FT	DOMAIN	78	109	Framework-3.
FT	DOMAIN	110	118	Complementarity-determining-3.
FT	DOMAIN	119	129	JK1 segment.
FT	DISULFID	43	109	By similarity.
FT	NON TER	129	129	
SQ	SEQUENCE	129 AA;	14070 MW;	7395528EA2BB74D6 CRC64;

Query Match 66.3%; Score 392.5; DB 1; Length 129;  
Best Local Similarity 64.9%; Pred. Mismatches 15; Indels 5; Gaps 1;  
Matches 74; Conservative 20; Nmatch 15; Indels 5; Gaps 1;

QY	1	DIWVSQPSDLAVSLGSRVTNLKSSQSLYSNGKXKYLAWYQKQPSKLLIYASAR	60
DB	21	EIVLTSPGTLSPGSRATLSCRASQSV-----SSSYLAWYQKQPSKLLIYGASSR	75
QY	61	ESGVPRFSGSGSGTDTFTLISSVQADVAVYVCOQYYSYPLTFAGCTKLELKR	114
DB	76	ATGIPDFSGSGSGTDTFTLIIRLEPXDFAVYVCOQYSSSPWTFGGQTKVEIKR	129

RESULT 20  
Q723Y4 PRELIMINARY; PRT; 236 AA.

ID	Q723Y4	PRELIMINARY; PRT; 236 AA.
AC	Q723Y4	
DT	01-OCT-2003 (TrEMBLrel. 25, Created)	
DT	01-OCT-2003 (TrEMBLrel. 25, Last sequence update)	
DT	01-MAR-2004 (TrEMBLrel. 26, Last annotation update)	
DE	Hypothetical protein.	
OS	Homo sapiens (Human).	
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	
OC	Mammalia; Eutheria; Primates; Catarrhini; Hominoidea; Homo.	
OX	NCBI_TaxID=9606;	
RN	[1]	
RP	SEQUENCE FROM N.A.	
RC	TISSUE=Skeletal Muscle;	
RX	MEDLINE=22398257; PubMed=12477932; DOI=10.1073/pnas.242603899;	
RA	Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,	
RA	Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,	
RA	Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,	
RA	Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,	
RA	Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,	
RA	Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,	
RA	Brownstein M.J., Udwin T.B., Toshiyuki S., Carninci P., Prange C.,	
RA	Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,	
RA	Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,	
RA	Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,	
RA	Vallalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,	
RA	Fahy J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,	
RA	Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,	
RA	Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,	
RA	Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,	
RA	Krzywinski M.I., Skalka U., Smalls D.E., Schnerch A., Schein J.E.,	
RA	Jones S.J., Marra M.A.;	
RT	"Generation and initial analysis of more than 15,000 full-length human	
RT	and mouse cDNA sequences."	
RL	Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).	
RN	[2]	
RP	SEQUENCE FROM N.A.	
RC	TISSUE=Skeletal Muscle;	
RA	Strausberg R.;	
RL	Submitted (MAR-2001) to the EMBL/GenBank/DBJ databases.	
DR	EMBL; BC005332; AAH05332.1; -;	
DR	HSSP; P01834; 1HEZ.	
DR	InterPro; IPR007110; Ig-like.	
DR	InterPro; IPR003597; Ig cl.	
DR	InterPro; IPR003006; Ig_VHC.	
DR	InterPro; IPR003596; Ig_V.	
DR	Pfam; PF07654; Cl-set; 1.	
DR	SMART; SM00406; IGV; 1.	
DR	PROSITE; PS50835; IG LIKE; 2.	
DR	PROSITE; PS00290; IG_VHC; UNKNOWN 1.	

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DE Ig kappa chain V-III region PC 2485/PC 4039.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]_SEQUENCE.
RP
RX MEDLINE=79073152; PubMed=103003;
RA Weigert M., Gatmaitan L., Loh E., Schilling J., Hood L.E.;
RT "Rearrangement of genetic information may produce immunoglobulin
RT diversity.";
RL Nature 276:785-790 (1978).
CC -!- MISCELLANEOUS: The PC 4285 and PC 4039 sequences are identical.
DR FIR; A01939; KWS95.
DR HSSP; P01665; IQNZ.
DR InterPro; IPR007110; Ig_v-like.
DR Pfam; PF00047; Ig_v.
DR SMART; SM00406; Ig_v; 1.
DR PROSITE; PS0835; IG_LIKE; 1.
KW Direct protein sequencing; Immunoglobulin V region.
FT DOMAIN 1 23 Framework-1.
FT DOMAIN 24 38 Complementarity-determining-1.
FT DOMAIN 39 53 Complementarity-determining-2.
FT DOMAIN 54 60 Complementarity-determining-3.
FT DOMAIN 61 92 Complementarity-determining-4.
FT DOMAIN 93 101 Complementarity-determining-3.
FT DOMAIN 102 111 Framework-4.
FT DISULFID 23 92 By similarity.
FT NON_TER 111 111
SQ SEQUENCE 111 AA; 11986 MW; BF38C59AA7858467 CRC64;

Query Match 66.0%; Score 391; DB 1; Length 111;
Best Local Similarity 68.1%; Pred. No. 7.7e-33;
Matches 77; Conservative 14; Mismatches 20; Indels 2; Gaps 1;

QY 1 DIVMSQSPDLAVSLGERTVLTNCKSSQSLLYSGNKNYLAWYQKPGQSPKLLIYWASAR 60
DB 1 DIVLTQSPASLASVIGQRTATISCKASVSTGSG--YSYMHYQKPGQSPKLLIYLASSL 58
QY 61 ESGVDPFRSGSGTGDTLTITSSVQAEADVAVVYCOQYYSYPLTFGAGTKLEIK 113
DB 59 ESGVDPFRSGSGTGDTLTINHPVEEDAAIYQCQSRELPLTFGAGTKLEIK 111

RESULT 23
Q65ZC8 PRELIMINARY; PRT; 244 AA.
AC Q65ZC8;
DT 25-OCT-2004 (TrEMBLrel. 28, Created)
DT 25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
DT 25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE Single-chain Fv (Fragment).
GN Name=scrF;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]_SEQUENCE FROM N.A.
RP MEDLINE=97362799; PubMed=9219263;
RX Kontermann R.E., Wing M.G., Winter G.;
RT "Complement recruitment using bispecific diabodies.";
RL Nat. Biotechnol. 15:629-631 (1997).
DR EMBL; Y13057; CAA73500.1; -.
DR InterPro; IPR003599; Ig.
DR InterPro; IPR007110; Ig_v-like.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; Ig; 2.
DR SMART; SM00409; Ig; 2.
DR SMART; SM00406; IgV; 2.
DR PROSITE; PS0835; IG_LIKE; 2.
FT NON_TER 1 1

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FT NON_TER 244
SQ SEQUENCE 244 AA; 26127 MW; 4B1F17868338F2BF CRC64;

Query Match 65.9%; Score 390; DB 2; Length 244;
Best Local Similarity 63.2%; Pred. No. 2.4e-32;
Matches 72; Conservative 19; Mismatches 17; Indels 6; Gaps 1;

QY 1 DIVMSQSPDLAVSLGERTVLTNCKSSQSLLYSGNKNYLAWYQKPGQSPKLLIYWASAR 60
DB 137 DIQTQSPSTLSASIGDRVTITCRASEGIYH-----WLAWYQKPGKAPKFLIYKASSL 190
QY 61 ESGVDPFRSGSGTGDTLTITSSVQAEADVAVVYCOQYYSYPLTFGAGTKLEIKR 114
DB 191 ASGAPRFRSGSGTGDTLTITSSVQAEADVAVVYCOQYYSYPLTFGAGTKLEIKR 244

RESULT 24
KV3M_MOUSE
ID KV3M_MOUSE STANDARD; PRT; 111 AA.
AC P01665;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 25-OCT-2004 (Rel. 45, Last annotation update)
DE Ig kappa chain V-III region PC 7043.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]_SEQUENCE.
RP MEDLINE=79073152; PubMed=103003;
RA Weigert M., Gatmaitan L., Loh E., Schilling J., Hood L.E.;
RT "Rearrangement of genetic information may produce immunoglobulin
RT diversity.";
RL Nature 276:785-790 (1978).
DR PIR; A01937; KWS943.
DR PDB; IQNZ; NMR; L=1-111.
DR InterPro; IPR007110; Ig_v-like.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; Ig; 1.
DR SMART; SM00406; IgV; 1.
DR PROSITE; PS0835; IG_LIKE; 1.
KW 3D-structure; Direct protein sequencing; Immunoglobulin V region.
FT DOMAIN 1 23 Framework-1.
FT DOMAIN 24 38 Complementarity-determining-1.
FT DOMAIN 39 53 Framework-2.
FT DOMAIN 54 60 Complementarity-determining-2.
FT DOMAIN 61 92 Framework-3.
FT DOMAIN 93 101 Complementarity-determining-3.
FT DOMAIN 102 111 Framework-4.
FT DISULFID 23 92 By similarity.
FT NON_TER 111 111
SQ SEQUENCE 111 AA; 12002 MW; 7A5FCB586C306D29 CRC64;

Query Match 65.7%; Score 389; DB 1; Length 111;
Best Local Similarity 67.3%; Pred. No. 1.2e-32;
Matches 76; Conservative 14; Mismatches 21; Indels 2; Gaps 1;

QY 1 DIVMSQSPDLAVSLGERTVLTNCKSSQSLLYSGNKNYLAWYQKPGQSPKLLIYWASAR 60
DB 1 DIVLTQSPASLASVIGQRTATISCKASVSTGSG--SYNNWYQKPGQSPKLLIYAASNL 58
QY 61 ESGVDPFRSGSGTGDTLTITSSVQAEADVAVVYCOQYYSYPLTFGAGTKLEIK 113
DB 59 ESGVDPFRSGSGTGDTLTINHPVEEDAAIYQCQSNEDEPTFGSGTKLEIK 111

RESULT 25
Q6GMX8 PRELIMINARY; PRT; 236 AA.
AC Q6GMX8;
DT 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)

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Search completed: July 25, 2005, 08:00:08  
Job time : 114.009 secs